

3.0 Results

The results of the Inventory are presented below, summarized by access category for land area and resources and grouped by study area. Table 3-1 shows the combined results for all 18 study areas and extrapolated areas, while Tables 3-2 through 3-19 show the results for individual study areas. Also depicted on the bottom of each table is a simplified summary showing accessibility of oil and gas resources. The tables show the results for Federal land access categorization by land area, total oil (used generically to include oil, NGLs, and liquids associated with gas reservoirs), and total natural gas (associated and non-associated with oil reservoirs). Oil and natural gas totals include undiscovered technically recoverable and reserves growth resources. Figures 3-1 through 3-92 show the corresponding pie charts depicting the simplified three-category and the detailed nine-category access hierarchies, the Federal land access categorization maps for each study area, and the corresponding maps showing undiscovered oil and natural gas resources on Federal lands. Tables 3-20 through 3-22 show the results for the areas that were extrapolated by region. The corresponding charts are in Figures 3-93 through 3-98.

3.1 Study Area Features

Each of the study areas is unique in terms of its Federal land and resources accessibility. Noteworthy features are presented below.

3.1.1 Northern Alaska

- Approximately 70 percent (17.8 million acres) of the Federal land is not accessible (Figures 3-3 and 3-4, Categories 1 through 4). Based on resource estimates, these lands contain 75 percent (13,255 MMbbls) of the technically recoverable Federal oil and 66 percent (52,459 BCF) of the technically recoverable Federal natural gas.
- Approximately 30 percent (7.5 million acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-3 and 3-4, Categories 5 through 8). Based on resource estimates, these lands contain 25 percent (4,502 MMbbls) of the technically recoverable Federal oil and 34 percent (27,173 BCF) of the technically recoverable Federal natural gas.
- Almost no Federal land in this study area is accessible under standard lease terms (Figures 3-3 and 3-4, Category 9). These lands contain no significant oil or natural gas.
- Coalbed natural gas was assessed by the USGS in early 2007 and is included in this Inventory along with the previously assessed conventional resources.

Table 3-1. Onshore United States—Total Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls) ^d	Percent of Federal	(BCF) ^e	Percent of Federal
	1.	No Leasing (Statutory/ Executive Order) (NLS)	39,945	14.3%	9,054	29.7%	19,449	8.4%
	2.	No Leasing (Administrative) (NLA)	50,414	18.1%	2,461	8.1%	16,618	7.2%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	55,278	19.8%	6,684	21.9%	49,814	21.6%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	20,245	7.3%	777	2.5%	8,621	3.7%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	283	0.1%	32	0.1%	430	0.2%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	11,883	4.3%	5,198	17.0%	40,021	17.3%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	18,389	6.6%	1,799	5.9%	35,751	15.5%
	8.	Leasing, Controlled Surface Use (CSU) ^f	34,631	12.4%	2,231	7.3%	36,716	15.9%
	9.	Leasing, Standard Lease Terms (SLTs)	47,972	17.2%	2,268	7.5%	23,554	10.2%
Total, Federal Lands including Split Estate			279,039	100%	30,503	100%	230,975	100%
Total Non-Federal			936,414		58,056		423,282	
Total Inventory Area			1,215,453		88,560		654,256	
Summary								
Inaccessible (Categories 1-4)			165,882	60%	18,976	62%	94,502	41%
Accessible with Restrictions (Categories 5-8)			65,186	23%	9,260	30%	112,919	49%
Accessible under Standard Lease Terms (Category 9)			47,972	17%	2,268	8%	23,554	10%
Total, Federal Lands Including Split Estate			279,039	100%	30,503	100%	230,975	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Million barrels

^e Billion cubic feet

^f Includes Cumulative Timing Limitations of ≤3 months

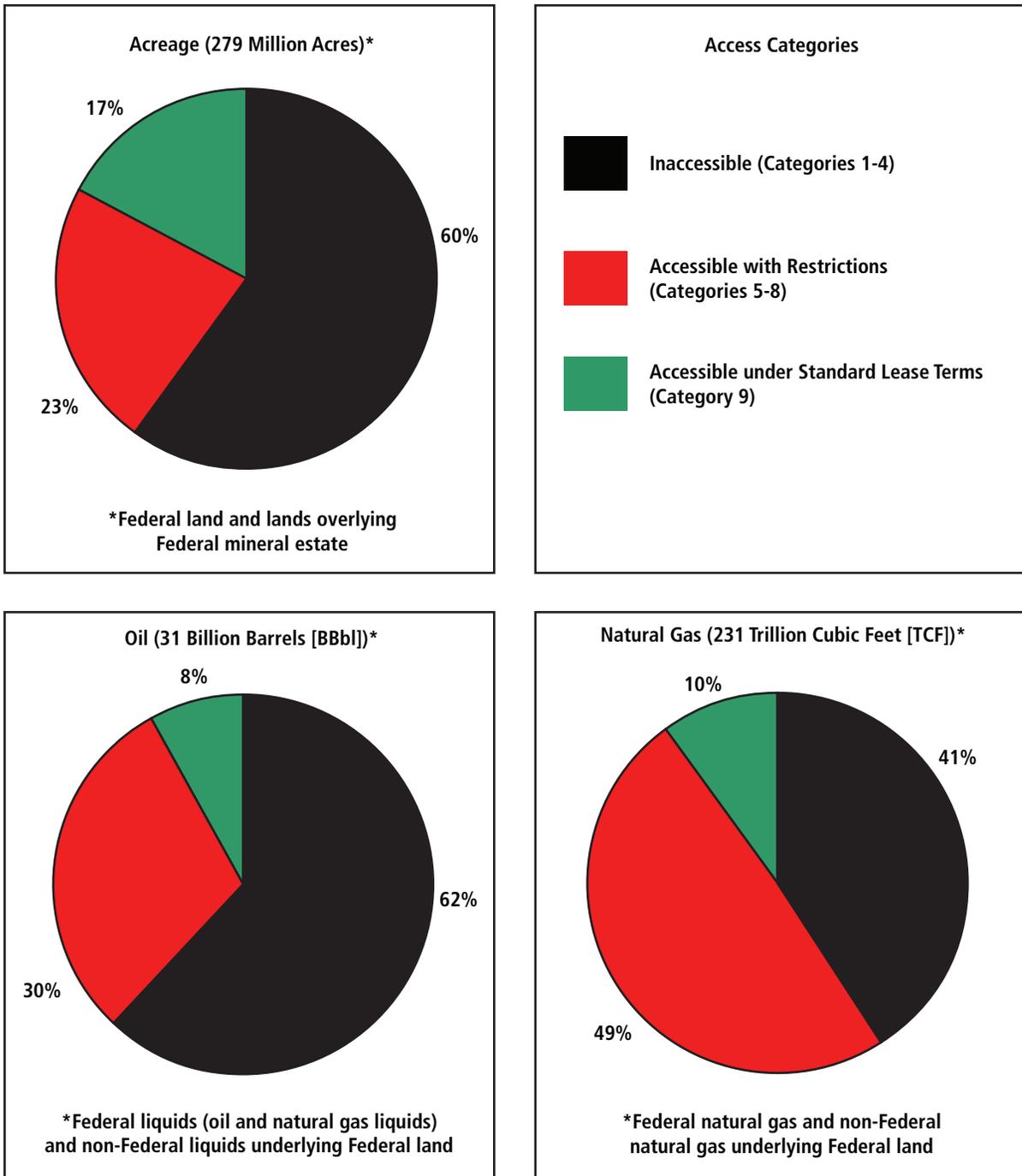


Figure 3-1. Simplified Chart of Results; Onshore United States—Total Federal Land and Oil and Natural Gas Resources* by Accessibility

* Undiscovered technically recoverable resources and reserves growth.

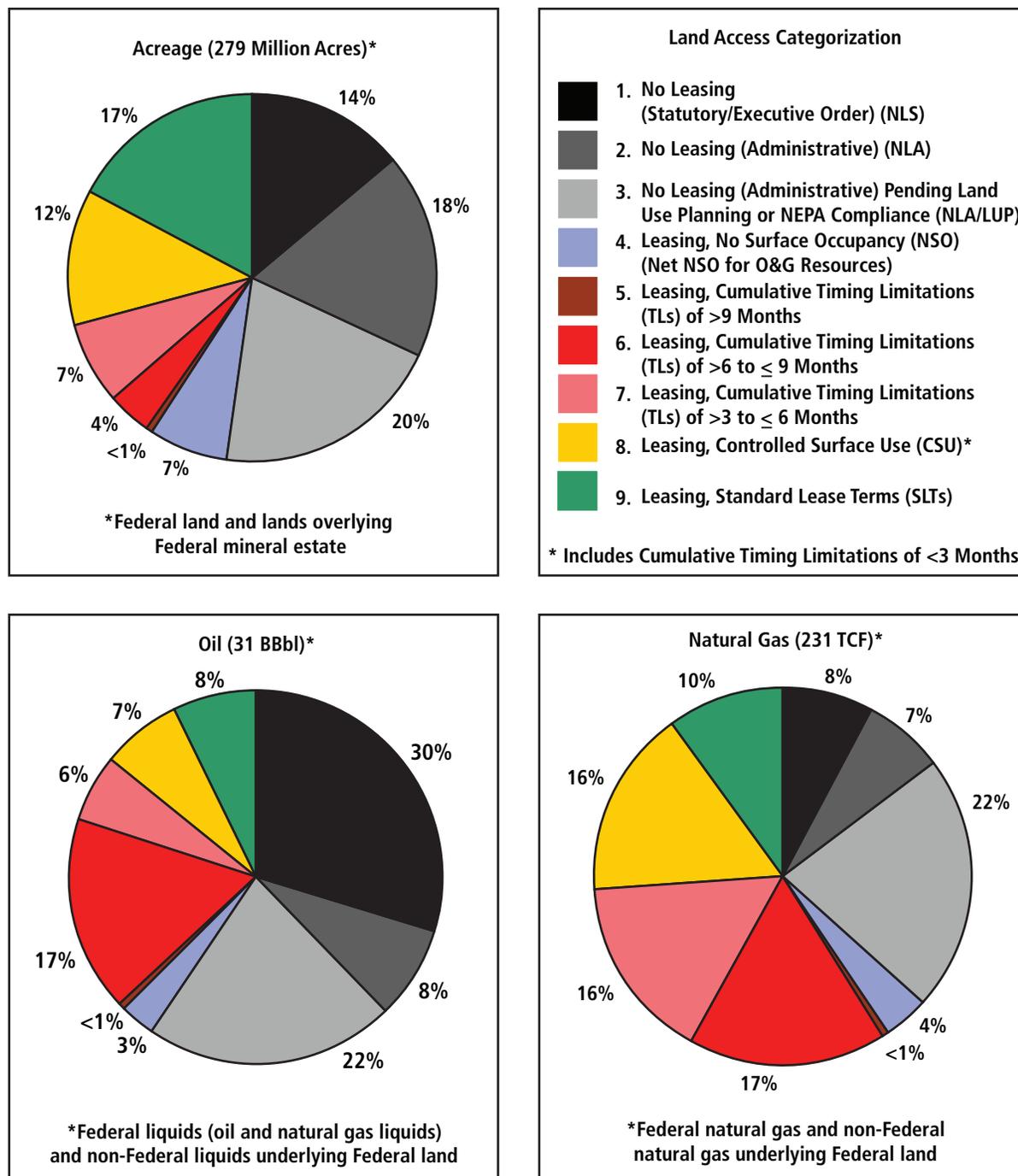


Figure 3-2. Chart of Results; Onshore United States—Total Federal Land and Oil and Natural Gas Resources* by Access Category

* Undiscovered technically recoverable resources and reserves growth.

Table 3-2. Northern Alaska Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
 More Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	2,526	10.0%	7,248	40.8%	8,028	10.1%
	2.	No Leasing (Administrative) (NLA)	1,359	5.4%	1,077	6.1%	4,952	6.2%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	13,667	53.9%	4,923	27.7%	39,235	49.3%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	276	1.1%	8	0.0%	244	0.3%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	-	0.0%	-	0.0%	-	0.0%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	7,038	27.8%	4,402	24.8%	26,048	32.7%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	256	1.0%	78	0.4%	420	0.5%
	8.	Leasing, Controlled Surface Use (CSU) ^d	227	0.9%	22	0.1%	705	0.9%
	9.	Leasing, Standard Lease Terms (SLTs)	2	0.0%	0	0.0%	3	0.0%
Total, Federal Lands including Split Estate			25,352	100.0%	17,758	100.0%	79,635	100.0%
Total Non-Federal			13,665		7,782		47,280	
Total Inventory Area			39,017		25,540		126,916	
Summary								
Inaccessible (Categories 1-4)			17,828	70%	13,255	75%	52,459	66%
Accessible with Restrictions (Categories 5-8)			7,521	30%	4,502	25%	27,173	34%
Accessible under Standard Lease Terms (Category 9)			2	0%	0	0%	3	0%
Total, Federal Lands Including Split Estate			25,352	100%	17,758	100%	79,635	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

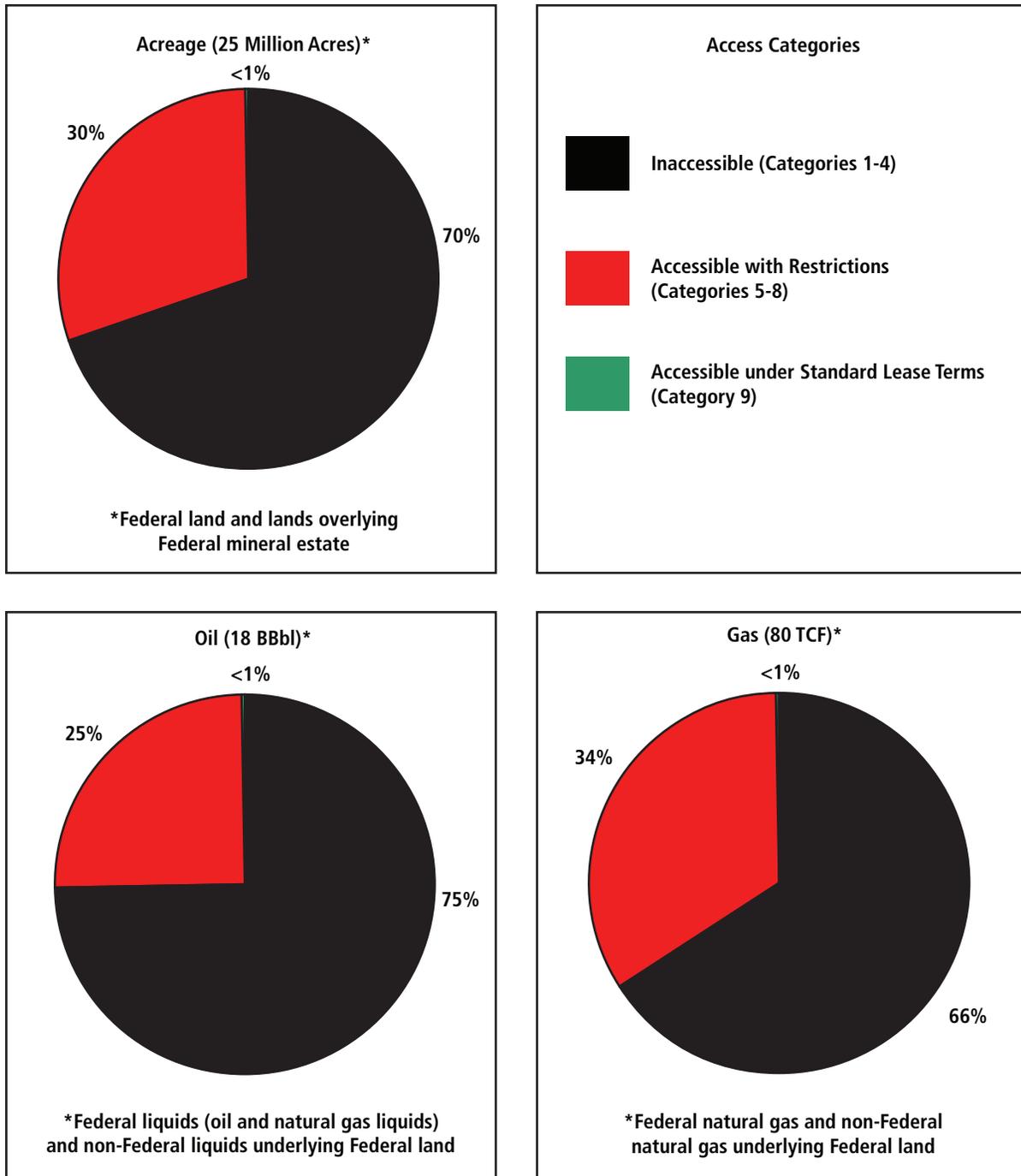


Figure 3-3. Simplified Chart of Results, Northern Alaska Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

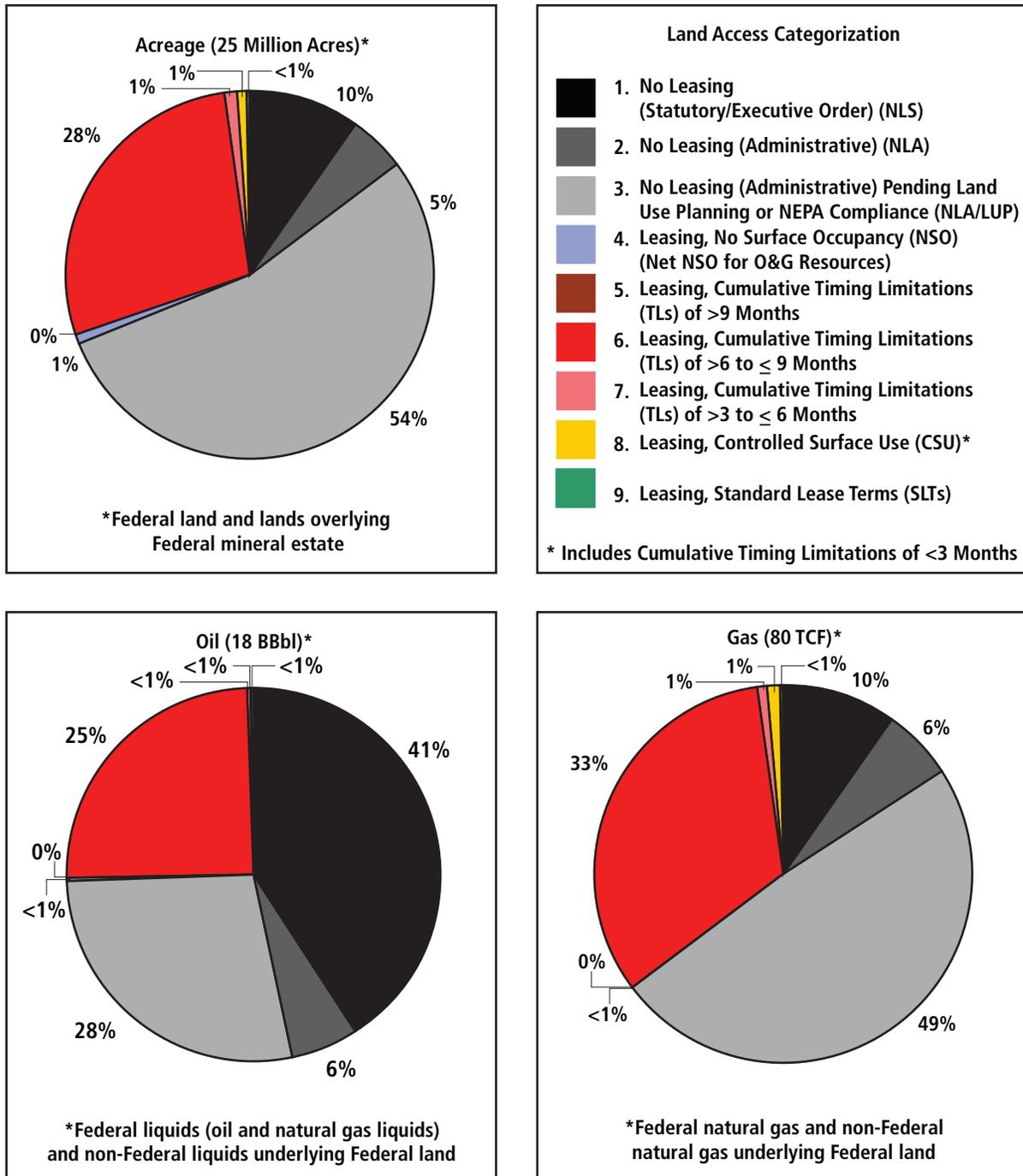


Figure 3-4. Chart of Results, Northern Alaska Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

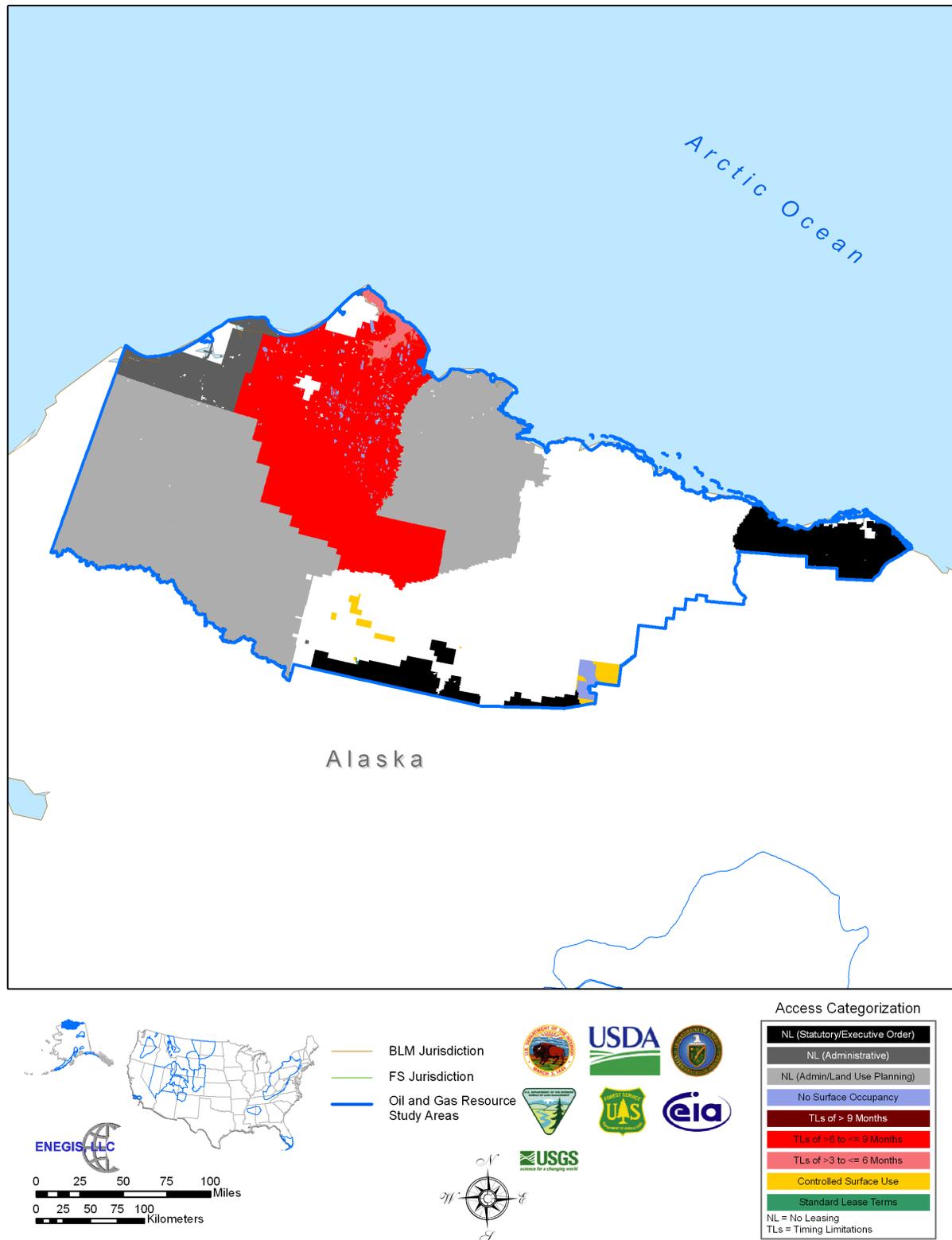


Figure 3-5. Federal Land Access Categorization Map, Northern Alaska Study Area

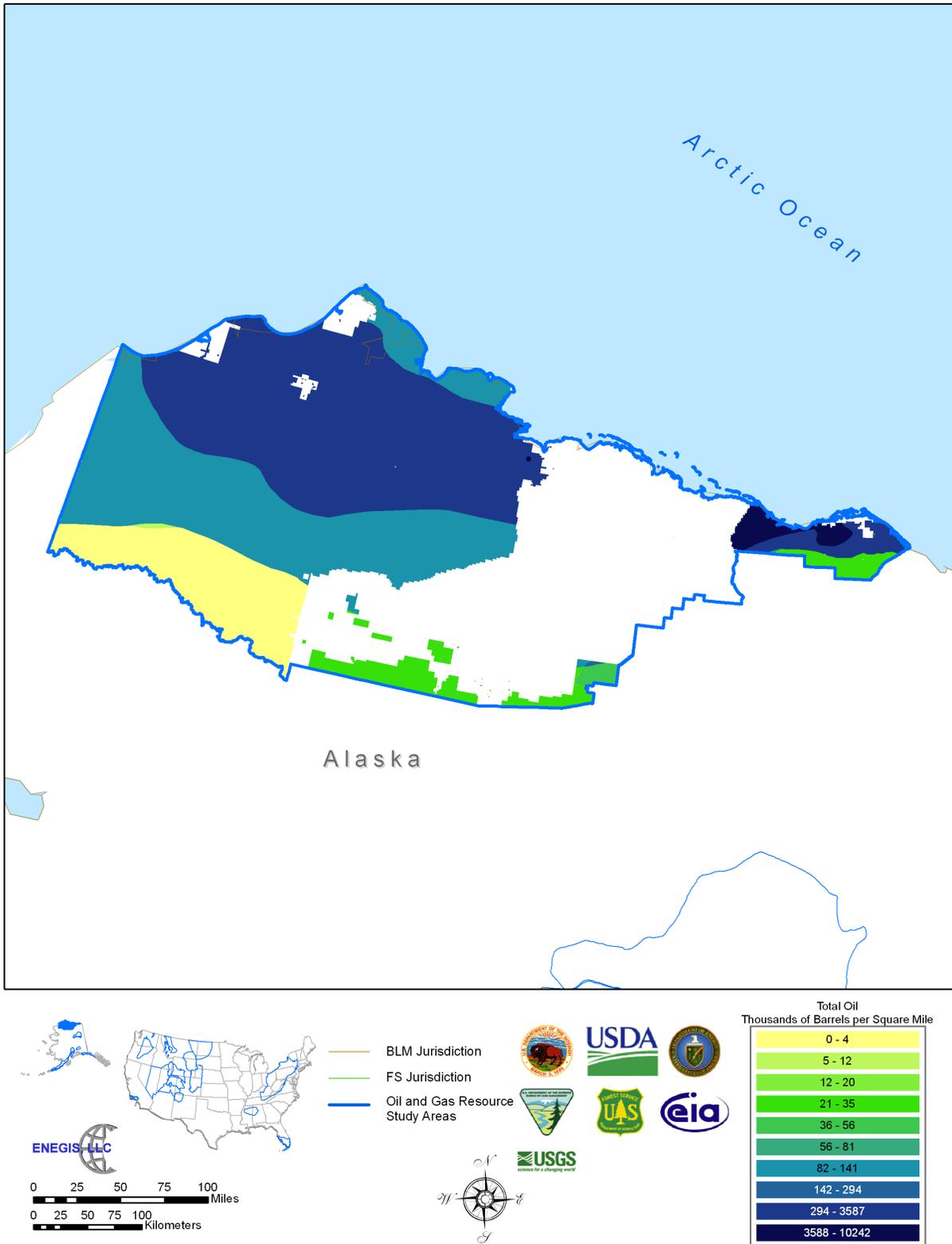


Figure 3-6. Map of Total Federal Oil, Northern Alaska Study Area

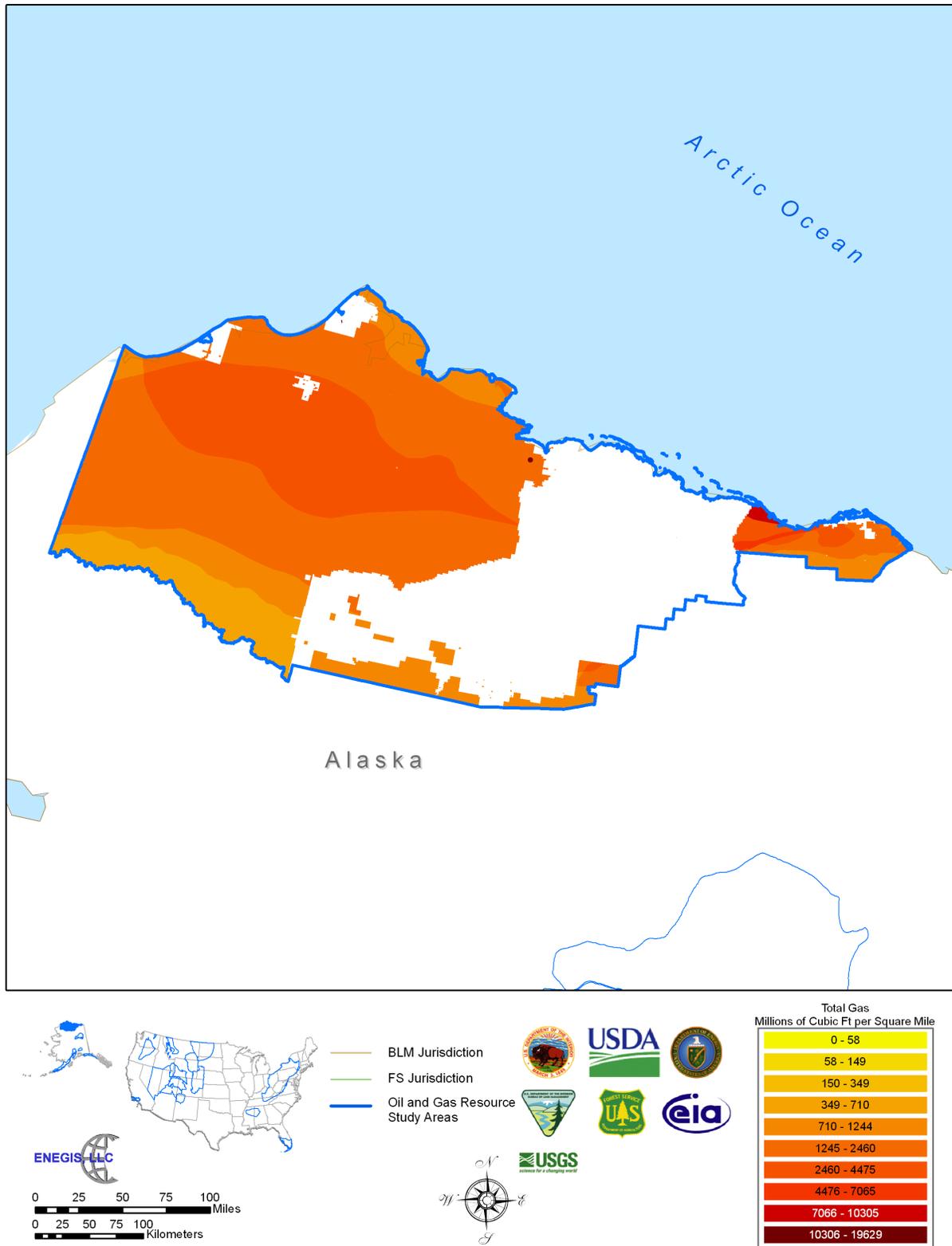


Figure 3-7. Map of Total Federal Natural Gas, Northern Alaska Study Area

3.1.2 Central Alaska – Yukon Flats

- Approximately 99 percent (4.1 million acres) of the Federal land is not accessible (Figures 3-8 and 3-9, Categories 1 through 4). Based on resource estimates, these lands contain almost all of the Federal oil (148.7 MMbbls) and Federal natural gas (2,720 BCF).
- Approximately 1 percent (28 thousand acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-8 and 3-9, Categories 5 through 8). These lands contain virtually no Federal oil or natural gas.
- Less than 1 percent (1 thousand acres) of the Federal land is accessible under standard lease terms (Figures 3-8 and 3-9, Category 9). These lands contain virtually no oil or natural gas.
- The majority of the Federal land and resources are within the Yukon Flats National Wildlife Refuge and therefore categorized as NLA.

3.1.3 Southern Alaska

- Approximately 98 percent (10.5 million acres) of the Federal land is not accessible (Figures 3-13 and 3-14, Categories 1 through 4). Based on resource estimates, these lands contain 93 percent (251.1 MMbbls) of the Federal oil and 93 percent (370.6 BCF) of the Federal natural gas.
- Approximately 1 percent (151.5 thousand acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-13 and 3-14, Categories 5 through 8). Based on resource estimates, these lands contain 6 percent

(16.4 MMbbls) of the Federal oil and 4 percent (16.4 BCF) of the Federal natural gas in the basin.

- Less than 1 percent (57.5 thousand acres) of the Federal land is accessible under standard lease terms (Figures 3-13 and 3-14, Category 9). Based on resource estimates, these lands contain 1 percent (2.2 MMbbls) of the Federal oil and 2 percent (6.8 BCF) of the Federal natural gas.
- The dominant surface management agencies are the Fish and Wildlife Service (FWS), National Park Service (NPS) and BLM.

3.1.4 Eastern Oregon-Washington

- Approximately 33 percent (2.8 million acres) of the Federal land is not accessible (Figures 3-18 and 3-19, Categories 1 through 4). Based on resource estimates, these lands contain 53 percent (1.9 MMbbls) of the Federal oil and 52 percent (443.6 BCF) of the Federal natural gas.
- Approximately 36 percent (3.0 million acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-18 and 3-19, Categories 5 through 8). Based on resource estimates, these lands contain 16 percent (0.6 MMbbls) of the Federal oil and 18 percent (151.2 BCF) of the Federal natural gas in the basin.
- Approximately 31 percent (2.6 million acres) of the Federal land is accessible under standard lease terms (Figures 3-18 and 3-19, Category 9). Based on resource estimates, these lands contain 30 percent (1.1 MMbbl) of the Federal oil and 30 percent (261.3 BCF) of the Federal natural gas.

Table 3-3. Central Alaska – Yukon Flats Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
Less Constrained ↑ More Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	318	7.6%	6	3.7%	96	3.5%
	2.	No Leasing (Administrative) (NLA)	3,793	91.0%	142	95.4%	2,601	95.6%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	30	0.7%	1	0.9%	24	0.9%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	-	0.0%	-	0.0%	-	0.0%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	-	0.0%	-	0.0%	-	0.0%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	-	0.0%	-	0.0%	-	0.0%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	-	0.0%	-	0.0%	-	0.0%
	8.	Leasing, Controlled Surface Use (CSU) ^d	28	0.7%	0	0.0%	0	0.0%
	9.	Leasing, Standard Lease Terms (SLTs)	1	0.0%	0	0.0%	0	0.0%
Total, Federal Lands including Split Estate			4,169	100.0%	149	100.0%	2,721	100.0%
Total Non-Federal			4,260		151		2,742	
Total Inventory Area			8,429		299		5,463	
Summary								
Inaccessible (Categories 1-4)			4,141	99%	149	100%	2,720	100%
Accessible with Restrictions (Categories 5-8)			28	1%	0	0%	0	0%
Accessible under Standard Lease Terms (Category 9)			1	0%	0	0%	0	0%
Total, Federal Lands Including Split Estate			4,169	100%	149	100%	2,721	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs^c Including associated dissolved and nonassociated natural gas^d Includes Cumulative Timing Limitations of ≤3 months

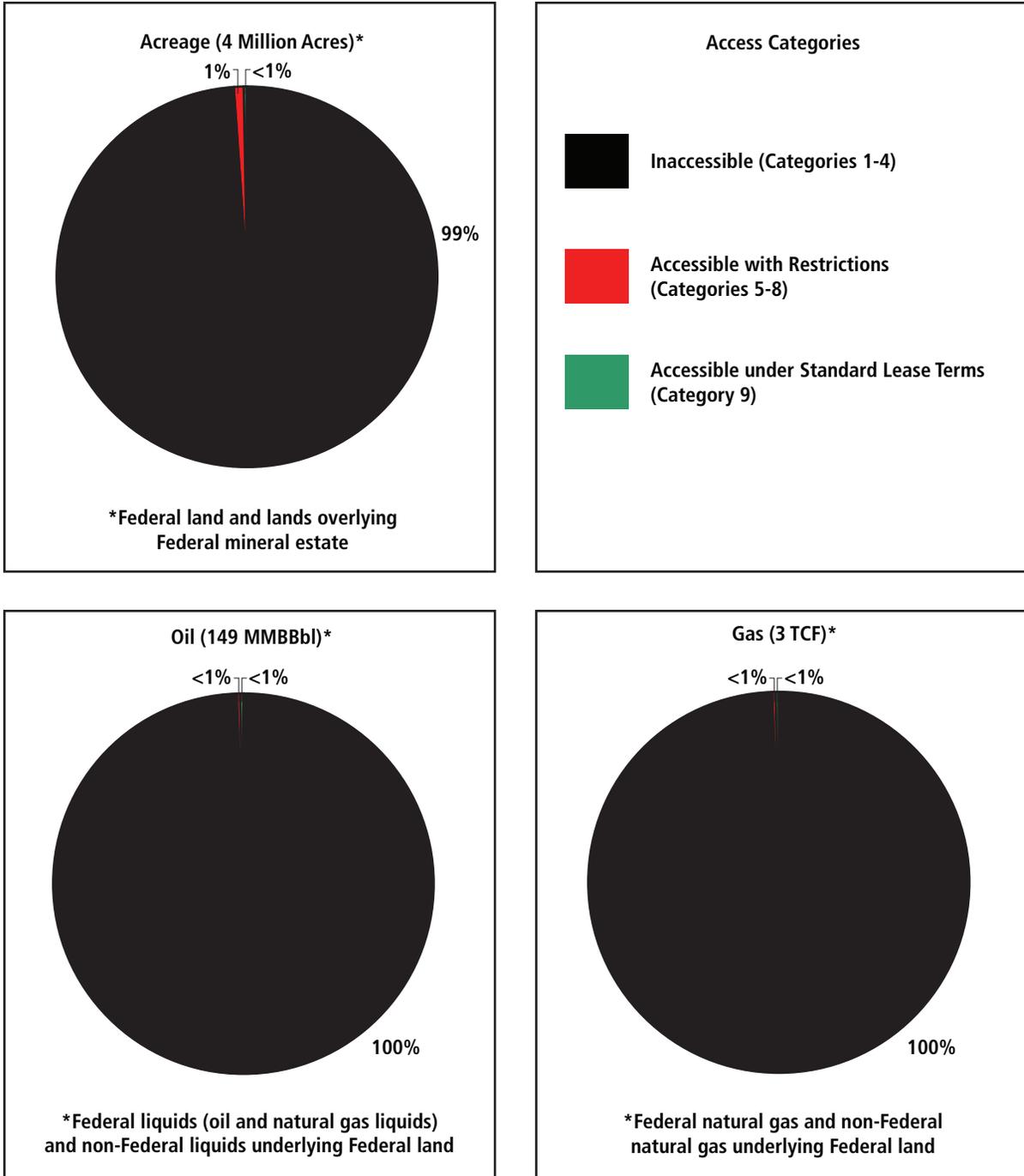


Figure 3-8. Simplified Chart of Results, Central Alaska – Yukon Flats Study Area— Federal Land and Oil and Natural Gas Resources by Accessibility

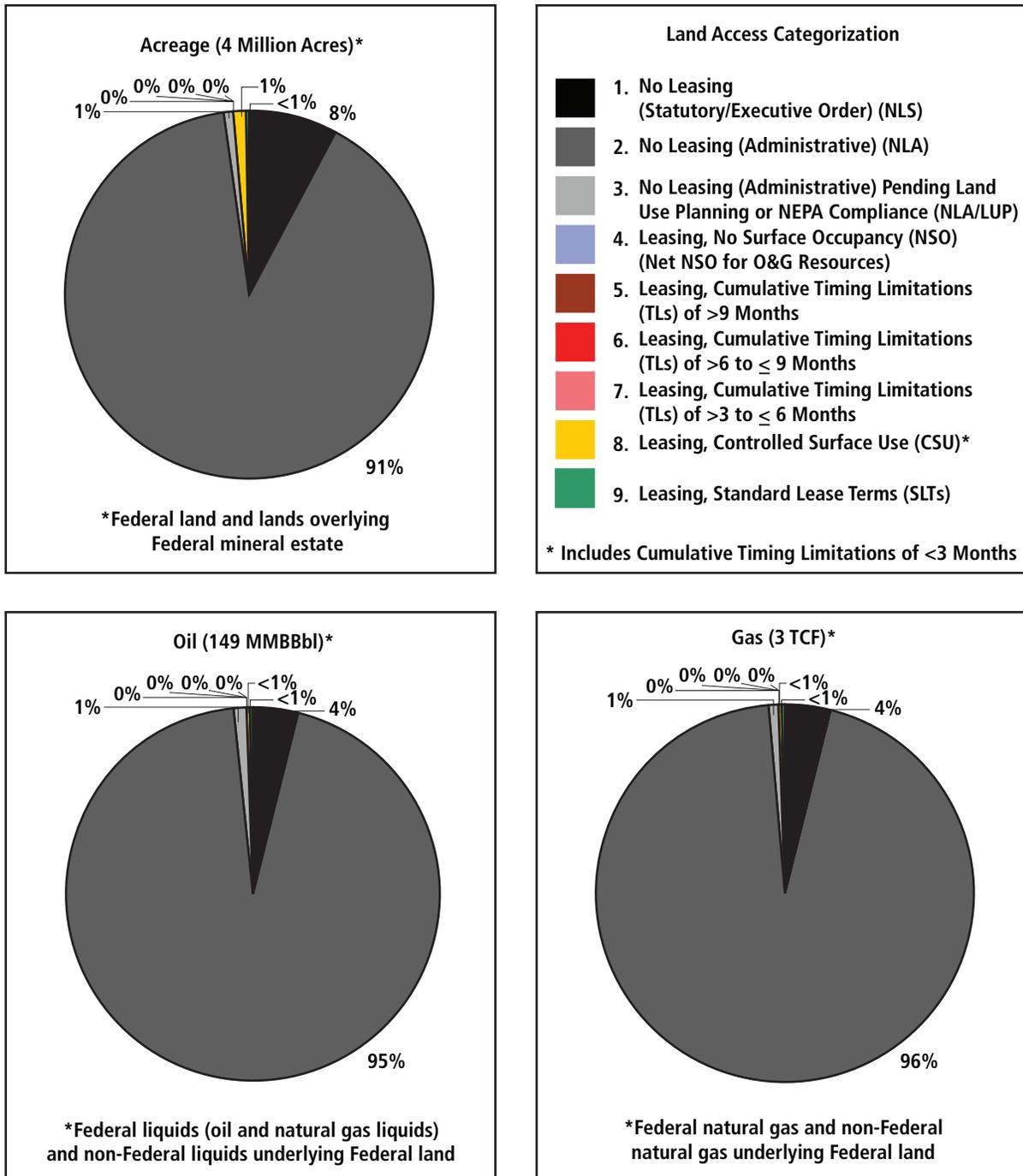


Figure 3-9. Chart of Results, Central Alaska – Yukon Flats Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

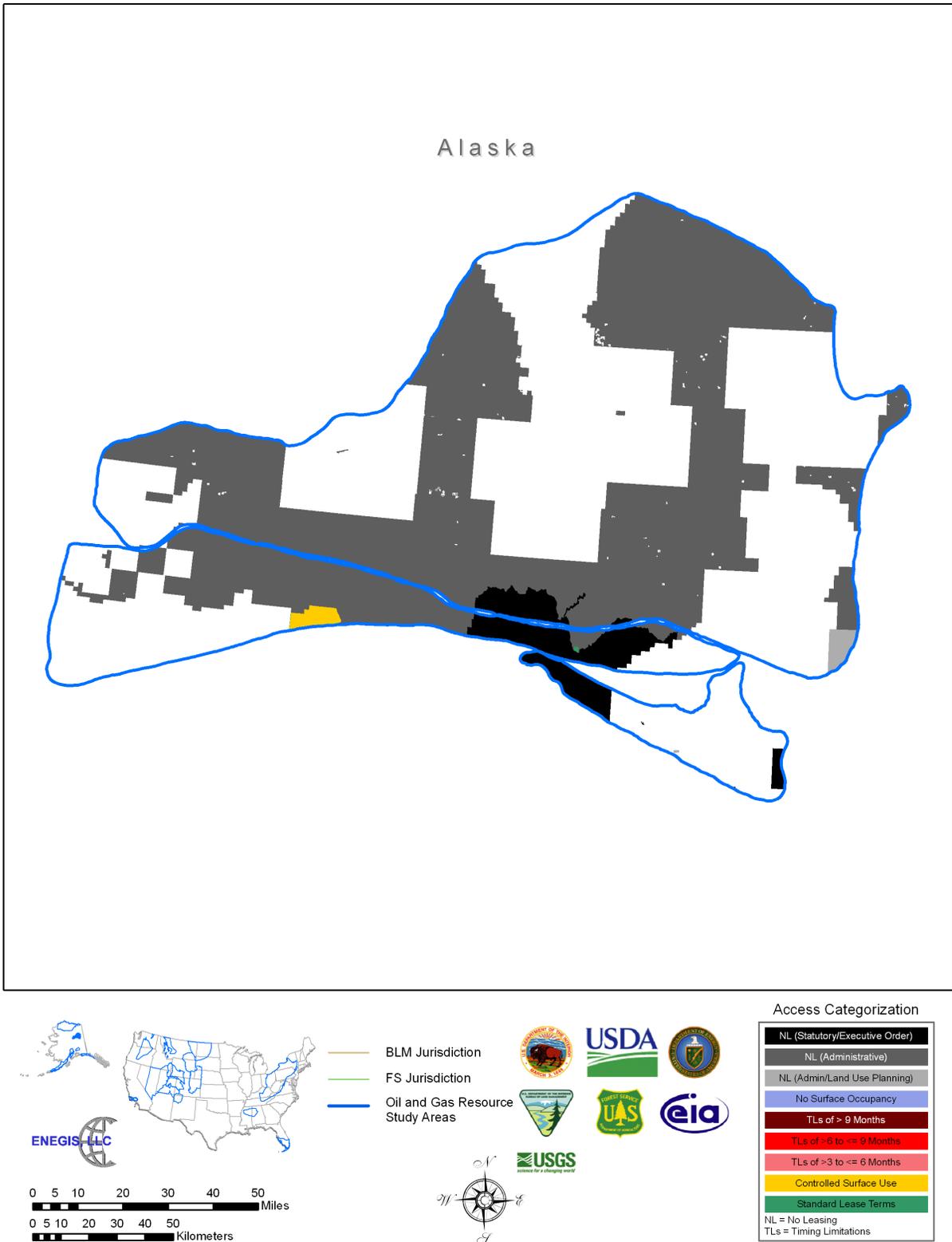


Figure 3-10. Federal Land Access Categorization Map, Central Alaska – Yukon Flats Study Area

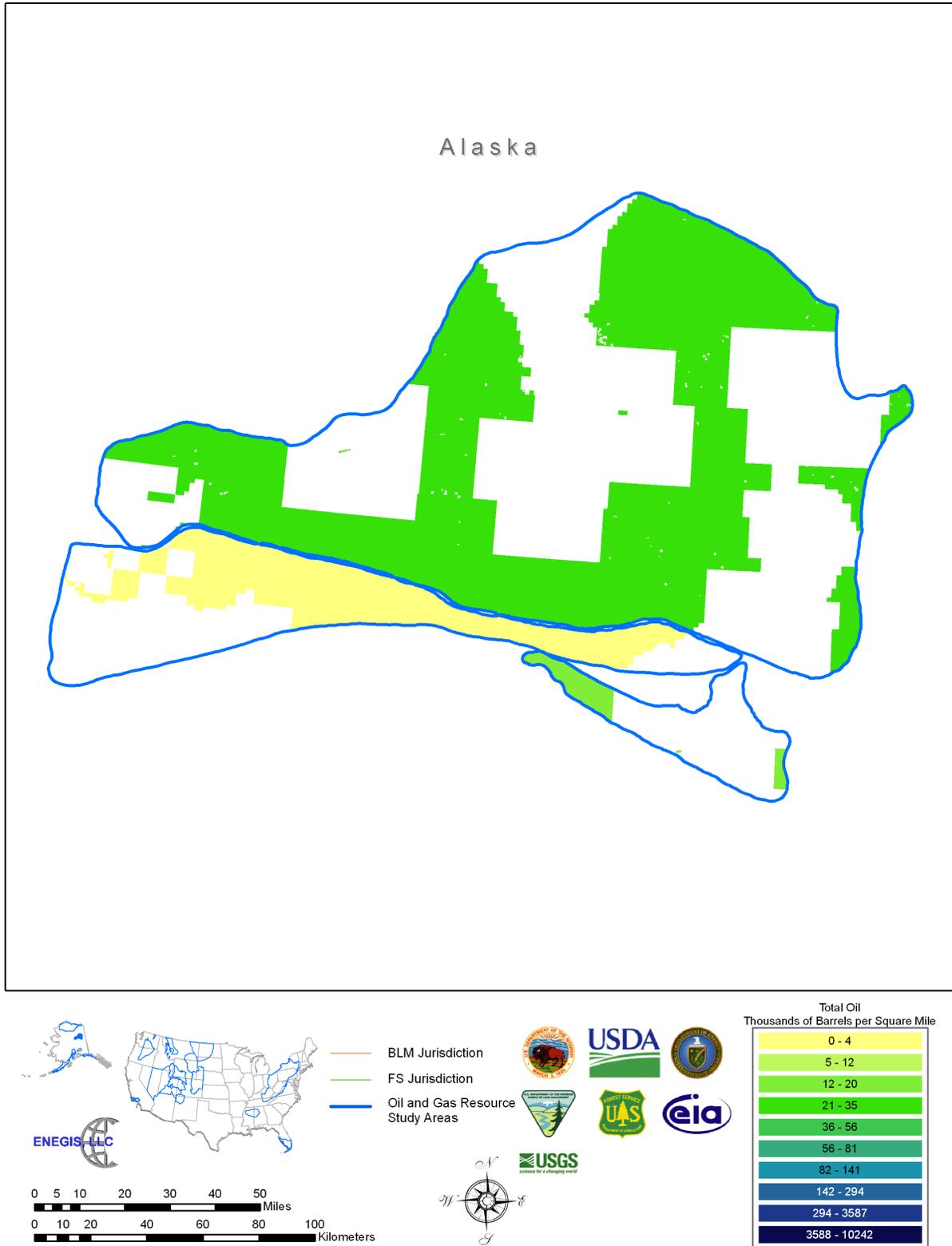


Figure 3-11. Map of Total Federal Oil, Central Alaska – Yukon Flats Study Area

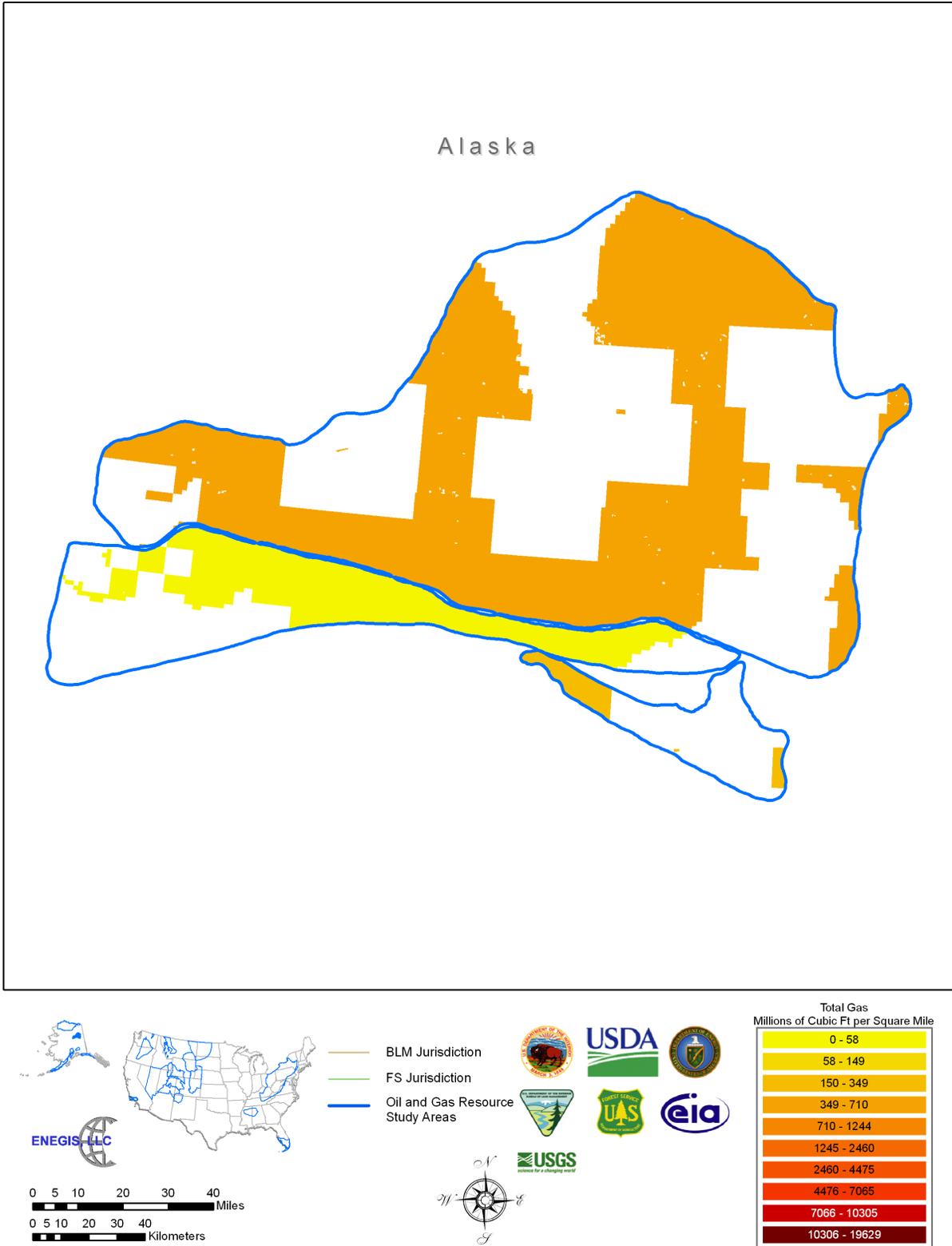


Figure 3-12. Map of Total Federal Natural Gas, Central Alaska – Yukon Flats Study Area

Table 3-4. Southern Alaska Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
↑ More Constrained ↓ Less Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	4,546	42.2%	82	30.2%	83	21.1%
	2.	No Leasing (Administrative) (NLA)	4,666	43.3%	119	44.2%	233	59.2%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	948	8.8%	42	15.5%	46	11.7%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	396	3.7%	8	3.1%	8	2.2%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	19	0.2%	6	2.2%	6	1.5%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	5	0.0%	5	1.7%	5	1.2%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	2	0.0%	-	0.1%	-	0.1%
	8.	Leasing, Controlled Surface Use (CSU) ^d	126	1.2%	6	2.1%	6	1.4%
	9.	Leasing, Standard Lease Terms (SLTs)	57	0.5%	2	0.8%	7	1.7%
Total, Federal Lands including Split Estate			10,765	100.0%	270	100.0%	394	100.0%
Total Non-Federal			14,695		354		943	
Total Inventory Area			25,460		624		1,336	
Summary								
Inaccessible (Categories 1-4)			10,556	98%	251	93%	371	94%
Accessible with Restrictions (Categories 5-8)			152	1%	16	6%	16	4%
Accessible under Standard Lease Terms (Category 9)			57	1%	2	1%	7	2%
Total, Federal Lands Including Split Estate			10,765	100%	270	100%	394	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

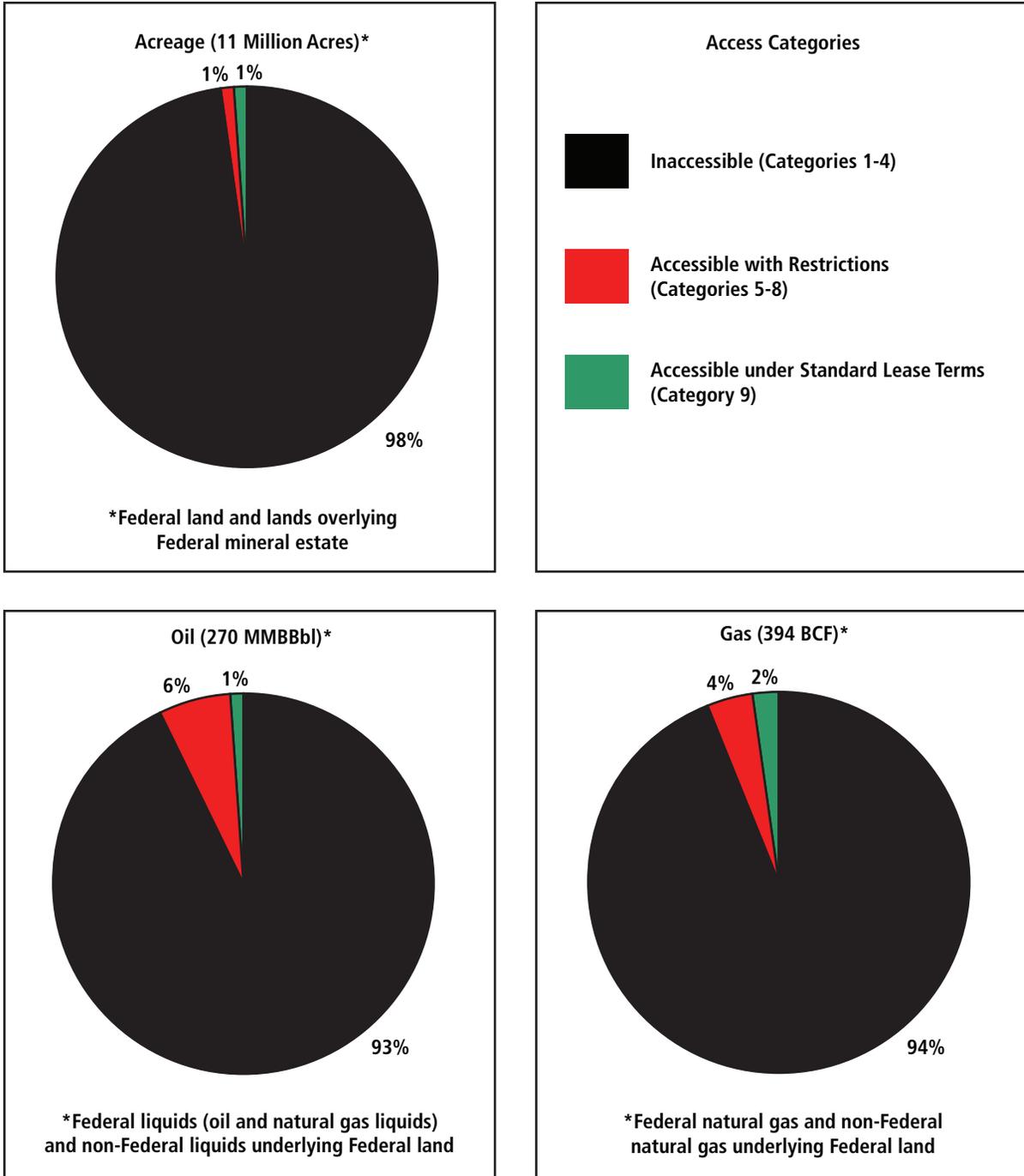


Figure 3-13. Simplified Chart of Results, Southern Alaska Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

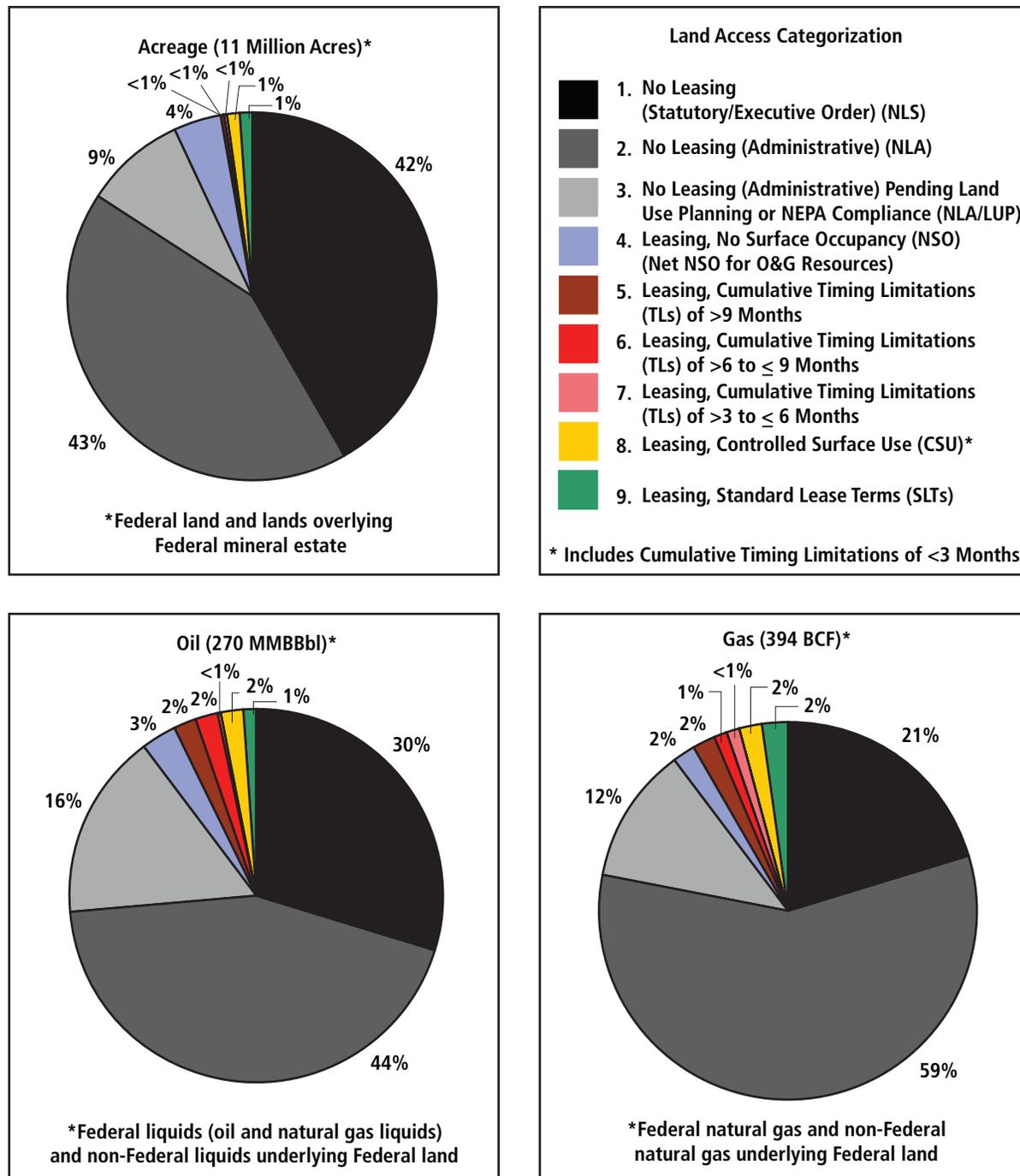


Figure 3-14. Chart of Results, Southern Alaska Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

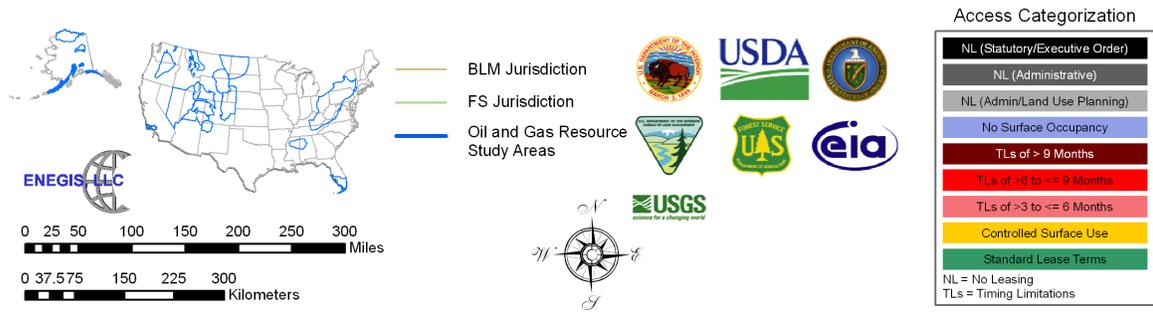


Figure 3-15. Federal Land Access Categorization Map, Southern Alaska Study Area



Figure 3-16. Map of Total Federal Oil, Southern Alaska Study Area

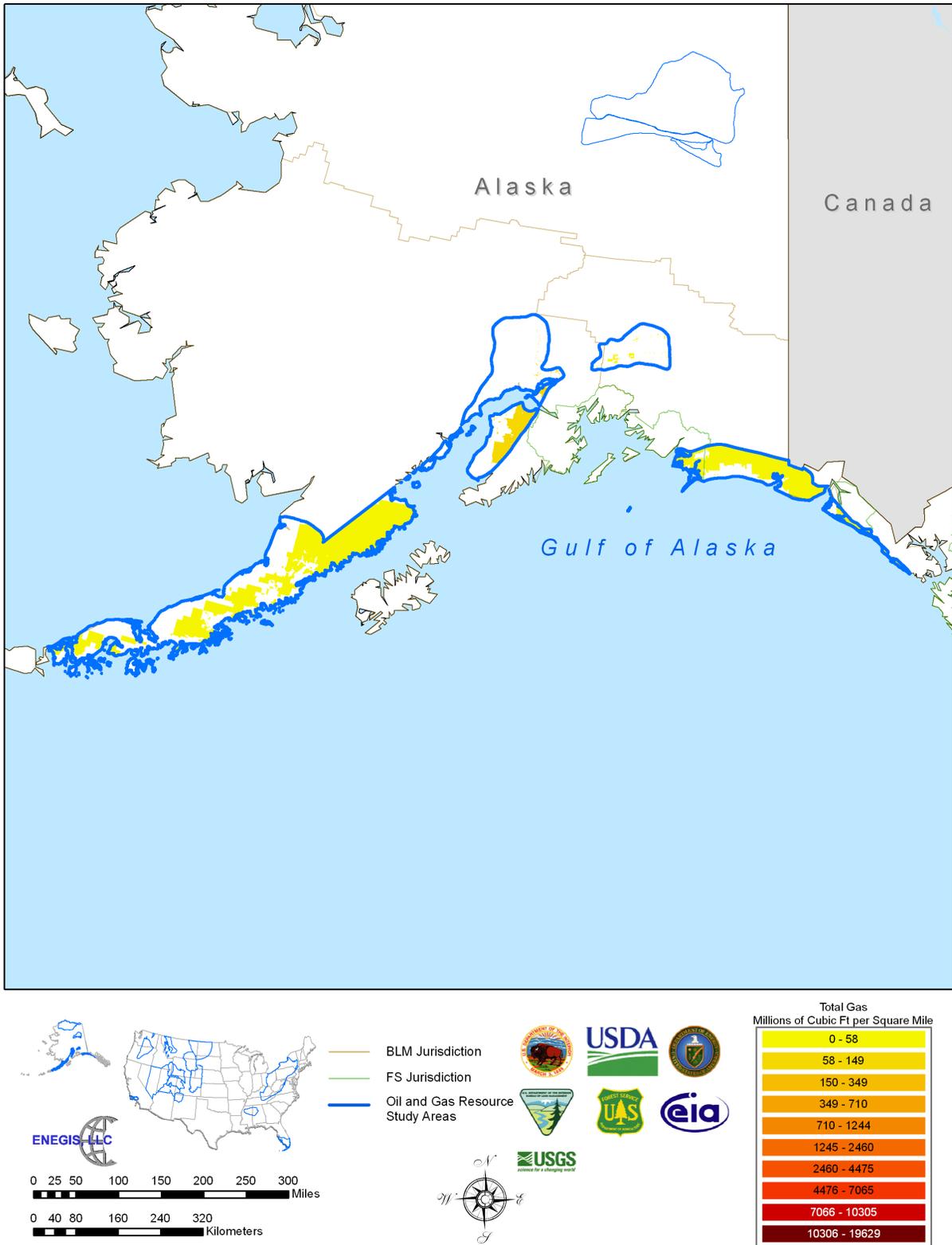


Figure 3-17. Map of Total Federal Natural Gas, Southern Alaska Study Area

- There has been little exploration in this basin due to the relative ineffectiveness of geophysical surveys caused by the extensive presence of volcanic rock.

3.1.5 Ventura Basin

- Approximately 92 percent (563.2 thousand acres) of the Federal land is not accessible (Figures 3-23 and 3-24, Categories 1 through 4). Based on resource estimates, these lands contain 48 percent (134.2 MMbbls) of the Federal oil and 55 percent (249.0 BCF) of the Federal natural gas.
- Approximately 5 percent (32.3 thousand acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-23 and 3-24, Categories 5 through 8). Based on resource estimates, these lands contain 48 percent (134.4 MMbbls) of the Federal oil and 41 percent (185.9 BCF) of the Federal natural gas in the basin.
- Approximately 3 percent (16.0 thousand acres) of the Federal land is accessible under standard lease terms (Figures 3-23 and 3-24, Category 9). Based on resource estimates, these lands contain 4 percent (11.9 MMbbls) of the Federal oil and 4 percent (17.7 BCF) of the Federal natural gas.
- The FS and the NPS are the dominant Federal land managers in the Ventura Basin.

3.1.6 Eastern Great Basin

- Approximately 51 percent (27.9 million acres) of the Federal land is not accessible (Figures 3-28 and 3-29, Categories 1 through 4). Based on resource estimates, these lands contain 49 percent (667.6 MMbbls) of the

Federal oil and 49 percent (99.3 BCF) of the Federal natural gas.

- Approximately 21 percent (11.3 million acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-28 and 3-29, Categories 5 through 8). Based on resource estimates, these lands contain 23 percent (310.4 MMbbls) of the Federal oil and 23 percent (46.3 BCF) of the Federal natural gas in the basin.
- Approximately 28 percent (15.4 million acres) of the Federal land is accessible under standard lease terms (Figures 3-28 and 3-29, Category 9). Based on resource estimates, these lands contain 28 percent (377.6 MMbbls) of the Federal oil and 29 percent (58.6 BCF) of the Federal natural gas.
- Federal land comprises nearly 80 percent of the study area with the BLM as the dominant land manager.

3.1.7 Uinta-Piceance Basin

- Approximately 40 percent (5.3 million acres) of the Federal land is not accessible (Figures 3-33 and 3-34, Categories 1 through 4). Based on resource estimates, these lands contain 14 percent (52.8 MMbbls) of the Federal oil and 16 percent (2,243 BCF) of the Federal natural gas.
- Approximately 32 percent (4.3 million acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-33 and 3-34, Categories 5 through 8). Based on resource estimates, these lands contain 59 percent (217.8 MMbbls) of the Federal oil and 62 percent (8,780 BCF) of the Federal natural gas in the basin.

Table 3-5. Eastern Oregon-Washington Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">↑</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">More Constrained</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Less Constrained</div> </div>	1.	No Leasing (Statutory/ Executive Order) (NLS)	1,096	13.1%	-	1.2%	16	1.8%
	2.	No Leasing (Administrative) (NLA)	812	9.7%	2	43.5%	355	41.5%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	153	1.8%	-	6.7%	55	6.5%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	740	8.8%	-	1.8%	17	2.0%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	-	0.0%	-	0.0%	-	0.0%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	64	0.8%	-	2.0%	17	1.9%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	1,125	13.4%	-	1.9%	22	2.6%
	8.	Leasing, Controlled Surface Use (CSU) ^d	1,802	21.5%	-	12.6%	112	13.1%
	9.	Leasing, Standard Lease Terms (SLTs)	2,577	30.8%	1	30.4%	261	30.5%
Total, Federal Lands including Split Estate			8,369	100.0%	3	100.0%	856	100.0%
Total Non-Federal			14,577		6		1,555	
Total Inventory Area			22,946		10		2,411	
Summary								
Inaccessible (Categories 1-4)			2,801	33%	2	53%	444	52%
Accessible with Restrictions (Categories 5-8)			2,991	36%	1	16%	151	18%
Accessible under Standard Lease Terms (Category 9)			2,577	31%	1	30%	261	31%
Total, Federal Lands Including Split Estate			8,369	100%	3	100%	856	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

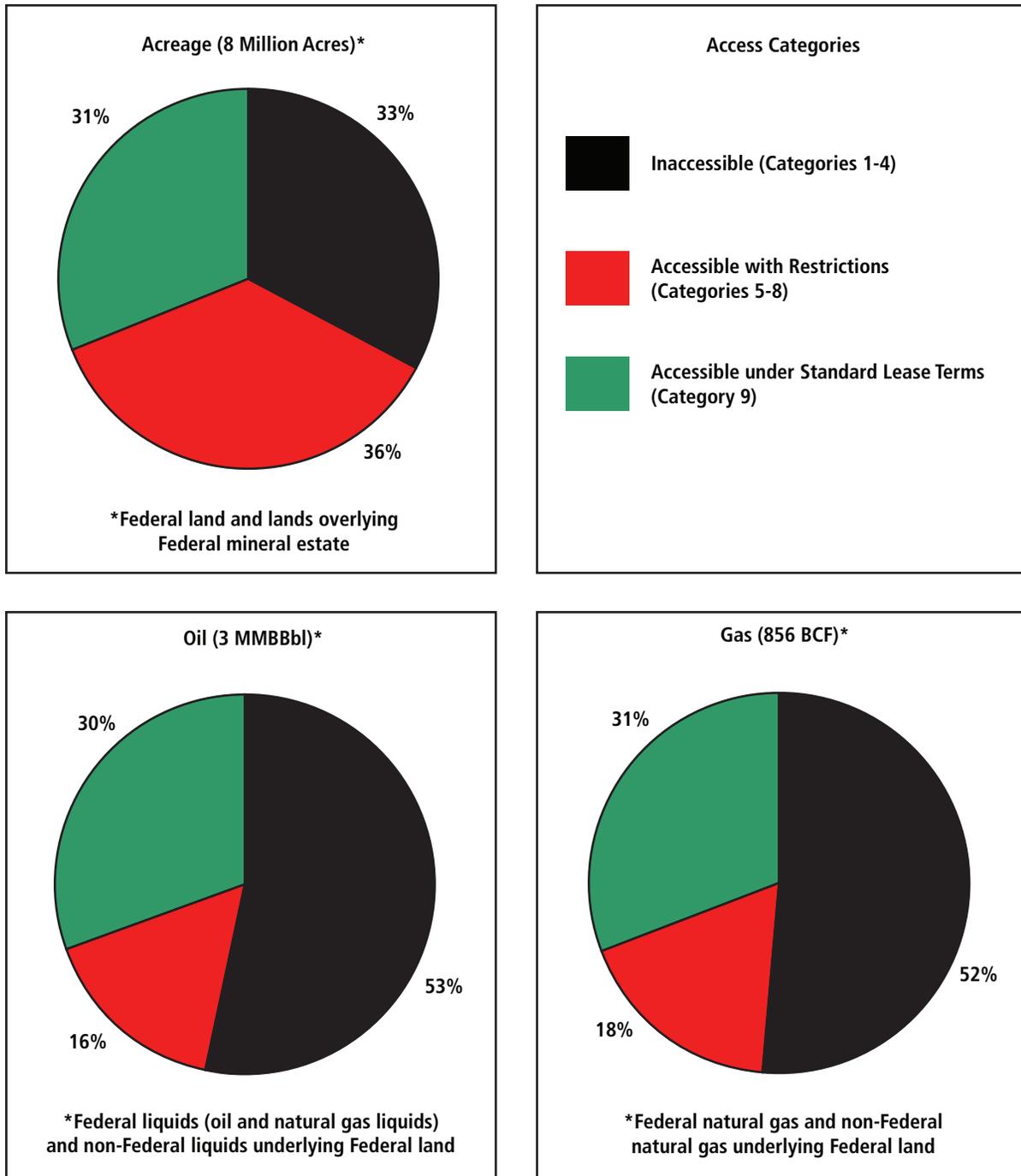


Figure 3-18. Simplified Chart of Results, Eastern Oregon-Washington Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

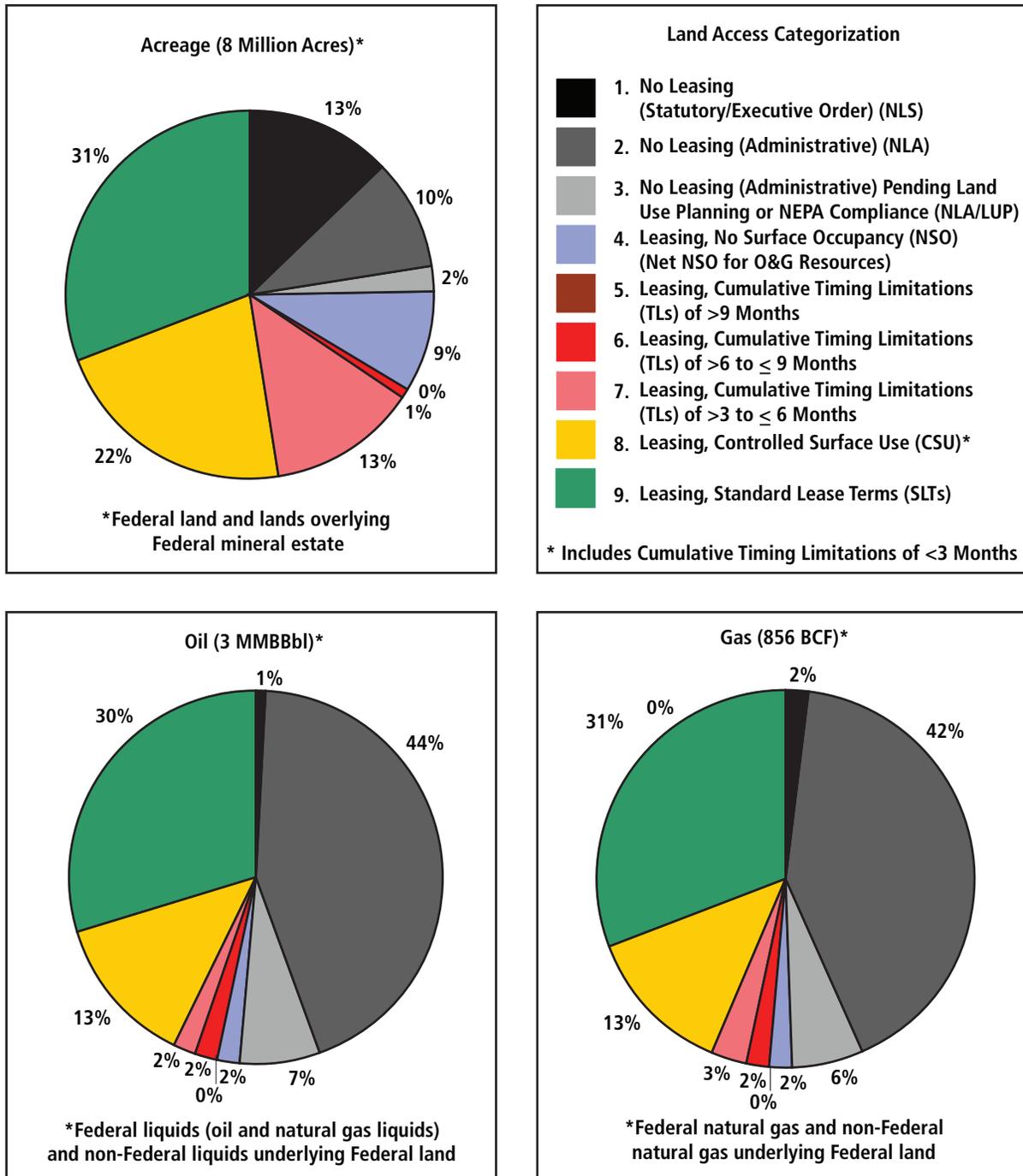


Figure 3-19. Chart of Results, Eastern Oregon-Washington Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

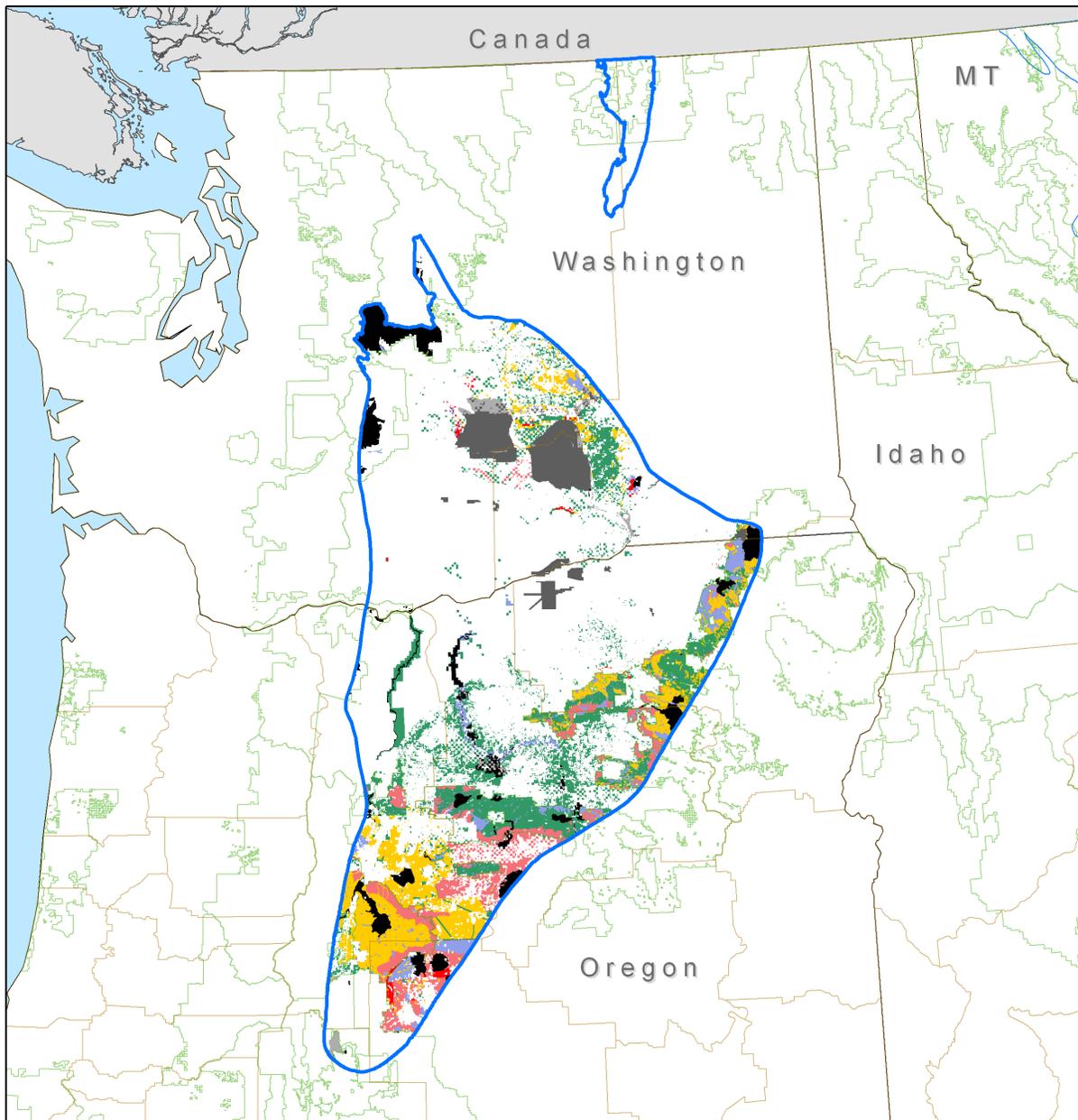


Figure 3-20. Federal Land Access Categorization Map, Eastern Oregon-Washington Study Area

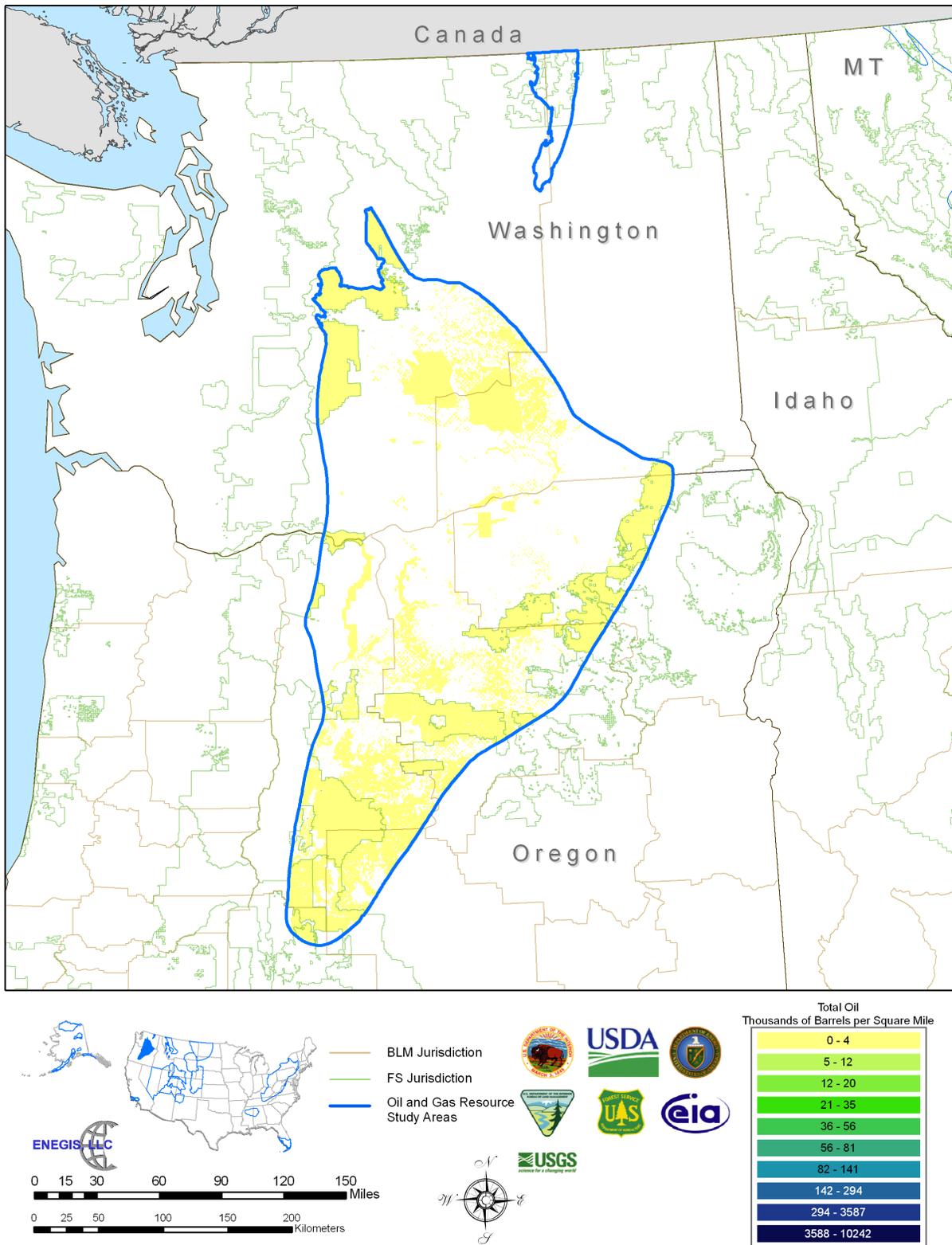


Figure 3-21. Map of Total Federal Oil, Eastern Oregon-Washington Study Area

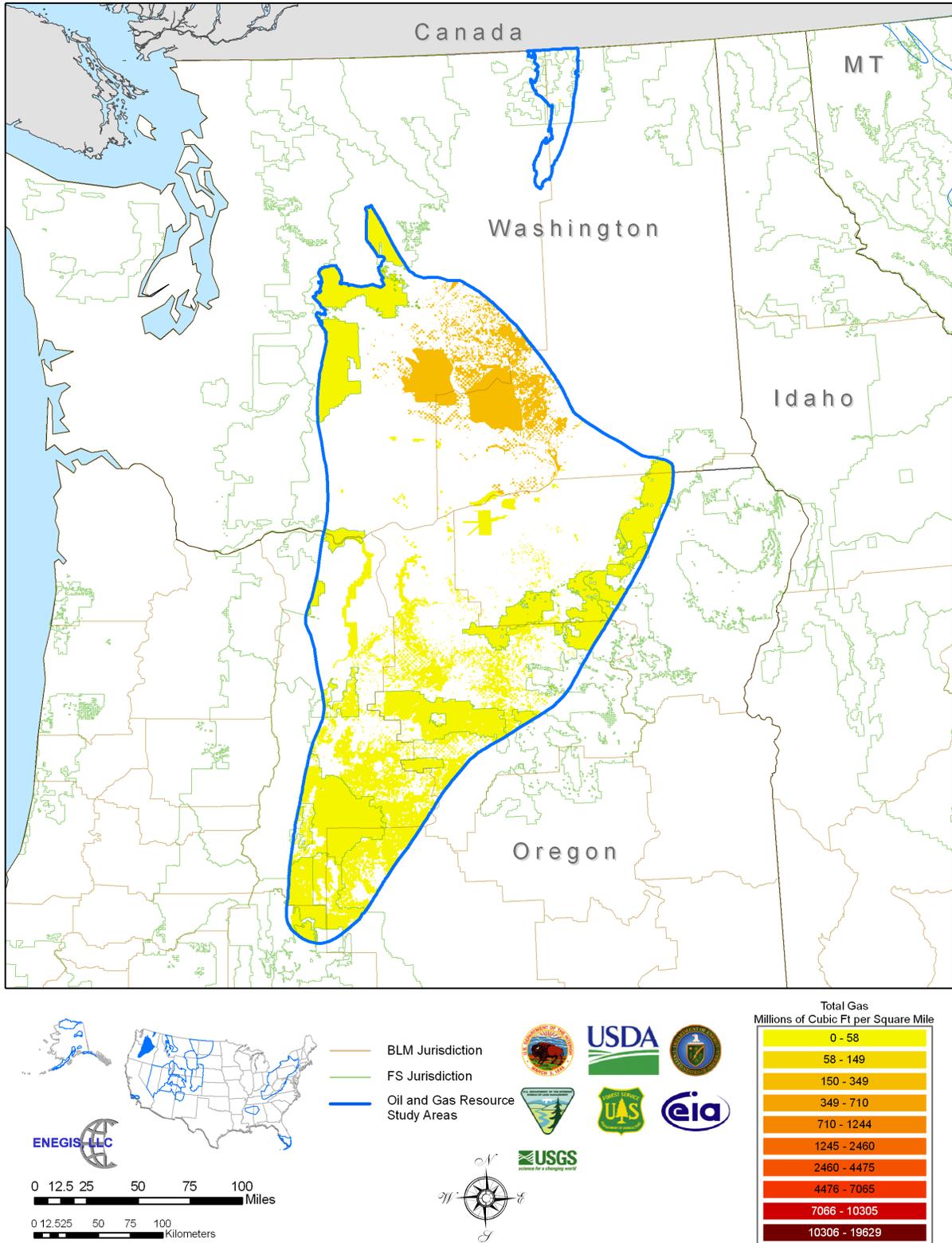


Figure 3-22. Map of Total Federal Natural Gas, Eastern Oregon-Washington Study Area

Table 3-6. Ventura Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
 More Constrained Less Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	280	45.7%	89	31.7%	169	37.3%
	2.	No Leasing (Administrative) (NLA)	28	4.6%	9	3.2%	17	3.8%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	21	3.4%	8	2.9%	14	3.1%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	235	38.4%	28	10.1%	49	10.8%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	-	0.0%	-	0.0%	-	0.0%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	-	0.0%	-	0.0%	-	0.0%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	4	0.7%	34	12.1%	44	9.8%
	8.	Leasing, Controlled Surface Use (CSU) ^d	28	4.6%	100	35.8%	141	31.3%
	9.	Leasing, Standard Lease Terms (SLTs)	16	2.6%	12	4.2%	18	3.9%
Total, Federal Lands including Split Estate			612	100.0%	281	100.0%	453	100.0%
Total Non-Federal			1,195		1,394		1,824	
Total Inventory Area			1,807		1,674		2,277	
Summary								
Inaccessible (Categories 1-4)			563	92%	134	48%	249	55%
Accessible with Restrictions (Categories 5-8)			32	5%	134	48%	186	41%
Accessible under Standard Lease Terms (Category 9)			16	3%	12	4%	18	4%
Total, Federal Lands Including Split Estate			612	100%	281	100%	453	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

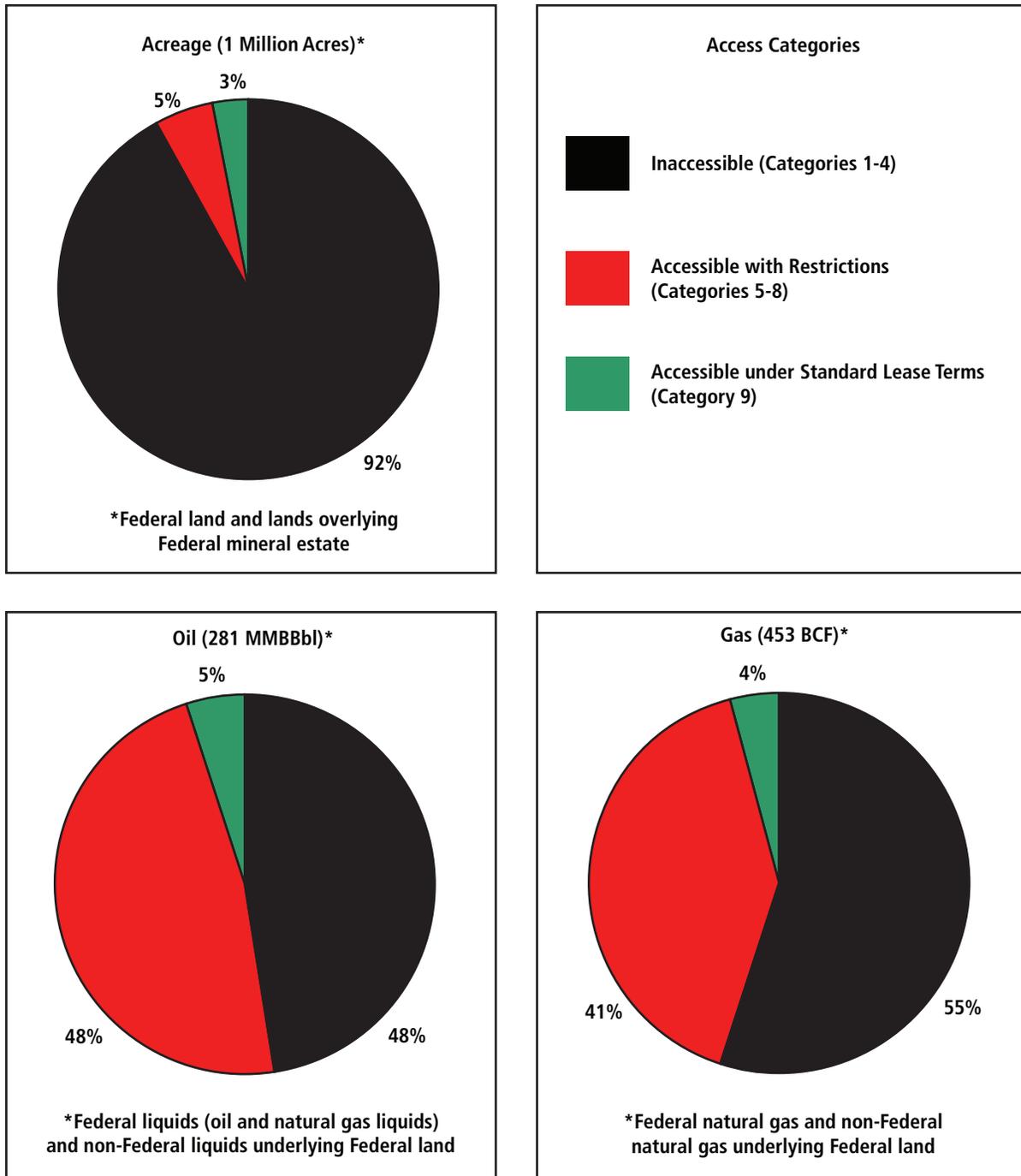


Figure 3-23. Simplified Chart of Results, Ventura Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

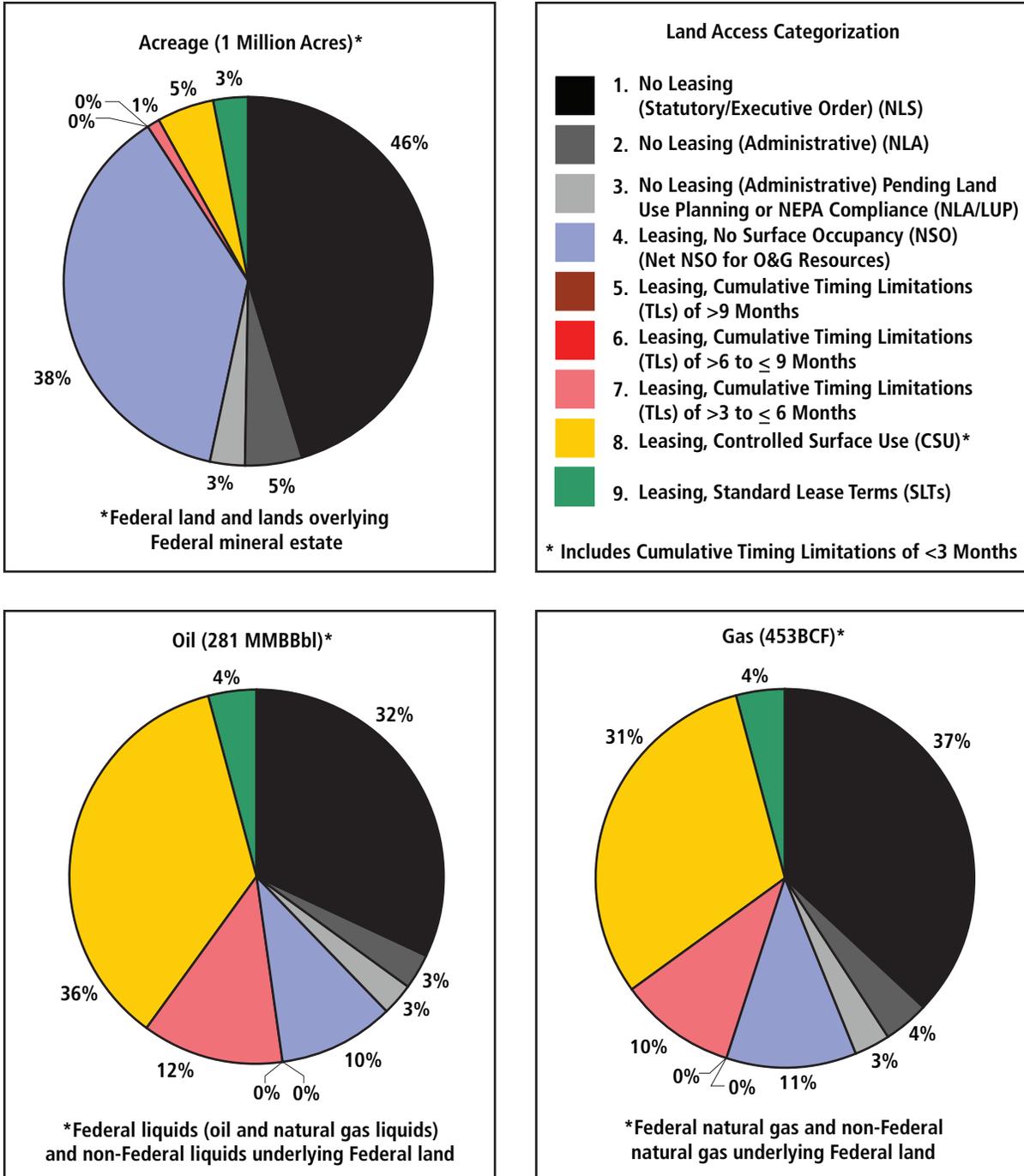


Figure 3-24. Chart of Results, Ventura Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

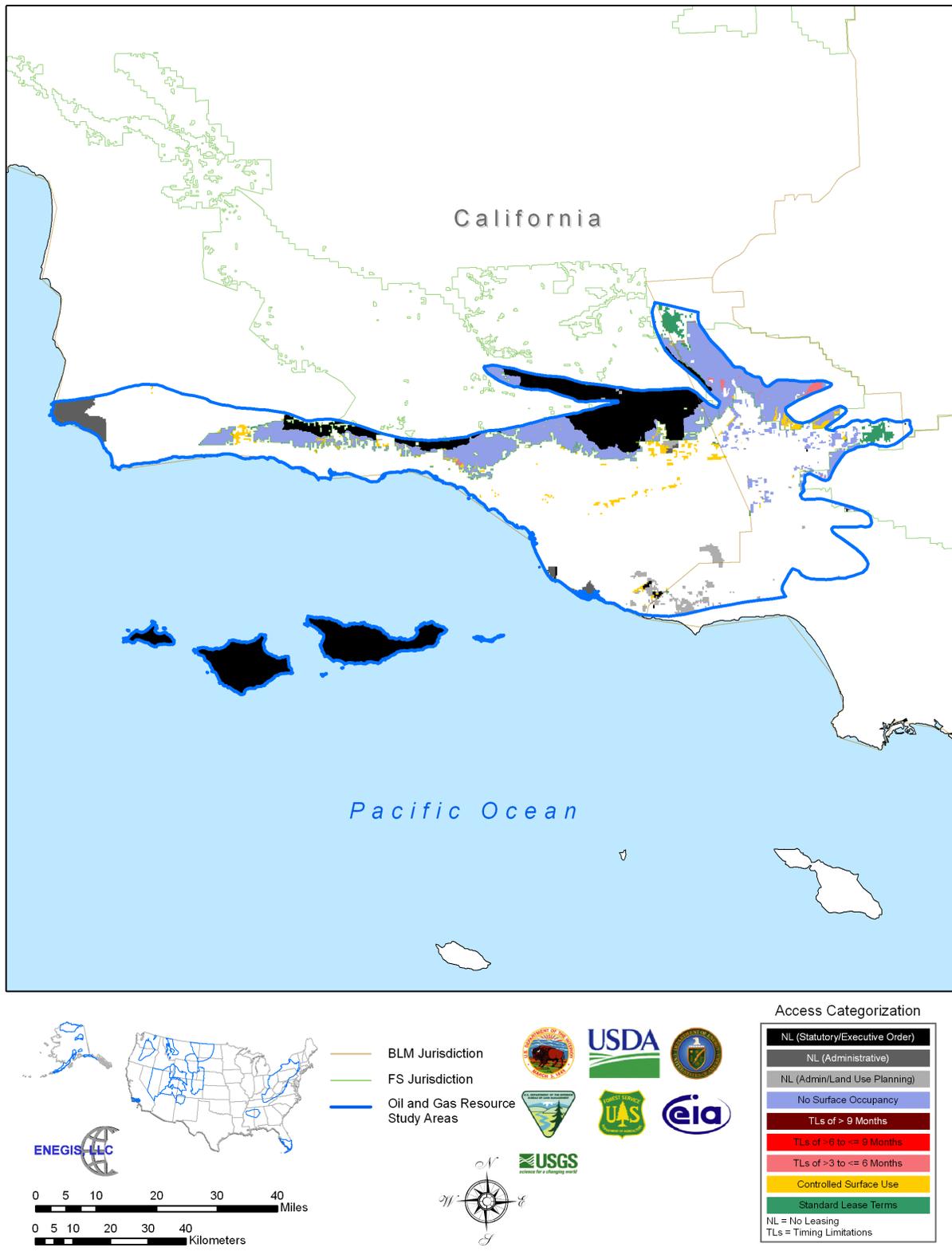


Figure 3-25. Federal Land Access Categorization Map, Ventura Basin Study Area

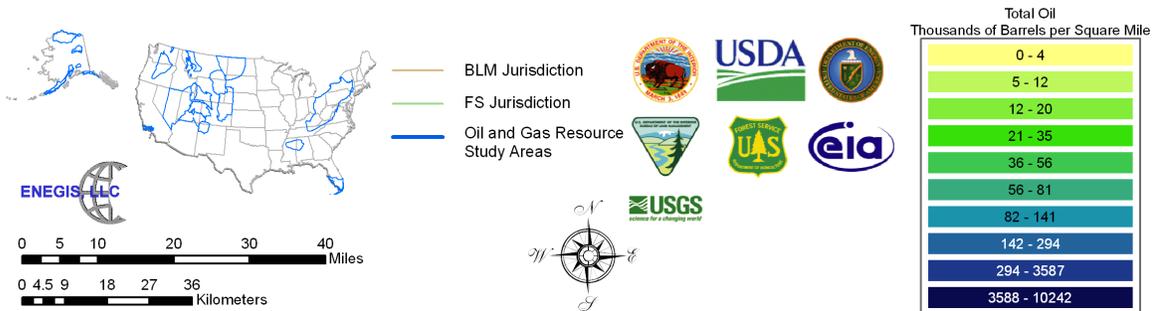
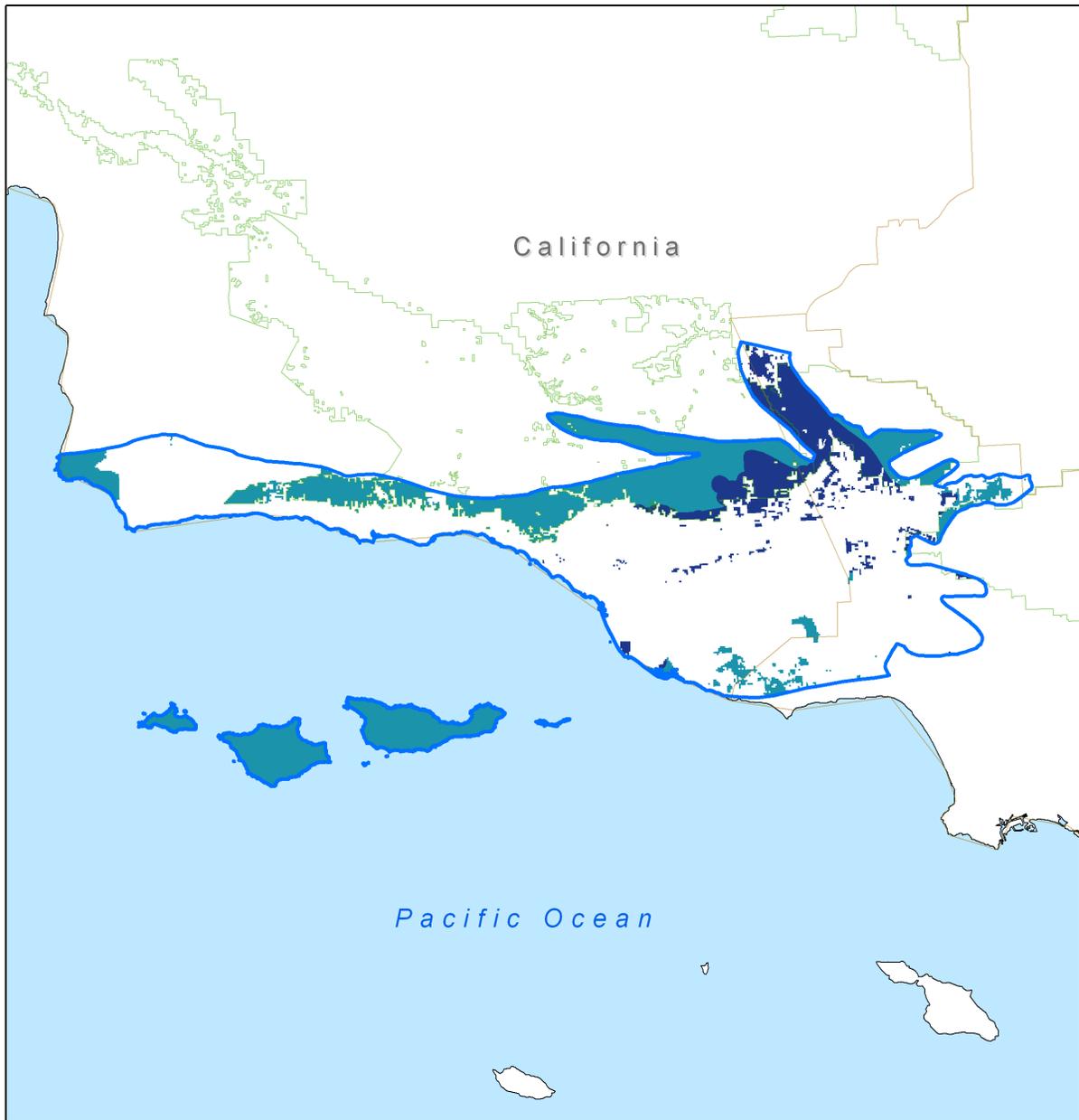


Figure 3-26. Map of Total Federal Oil, Ventura Basin Study Area

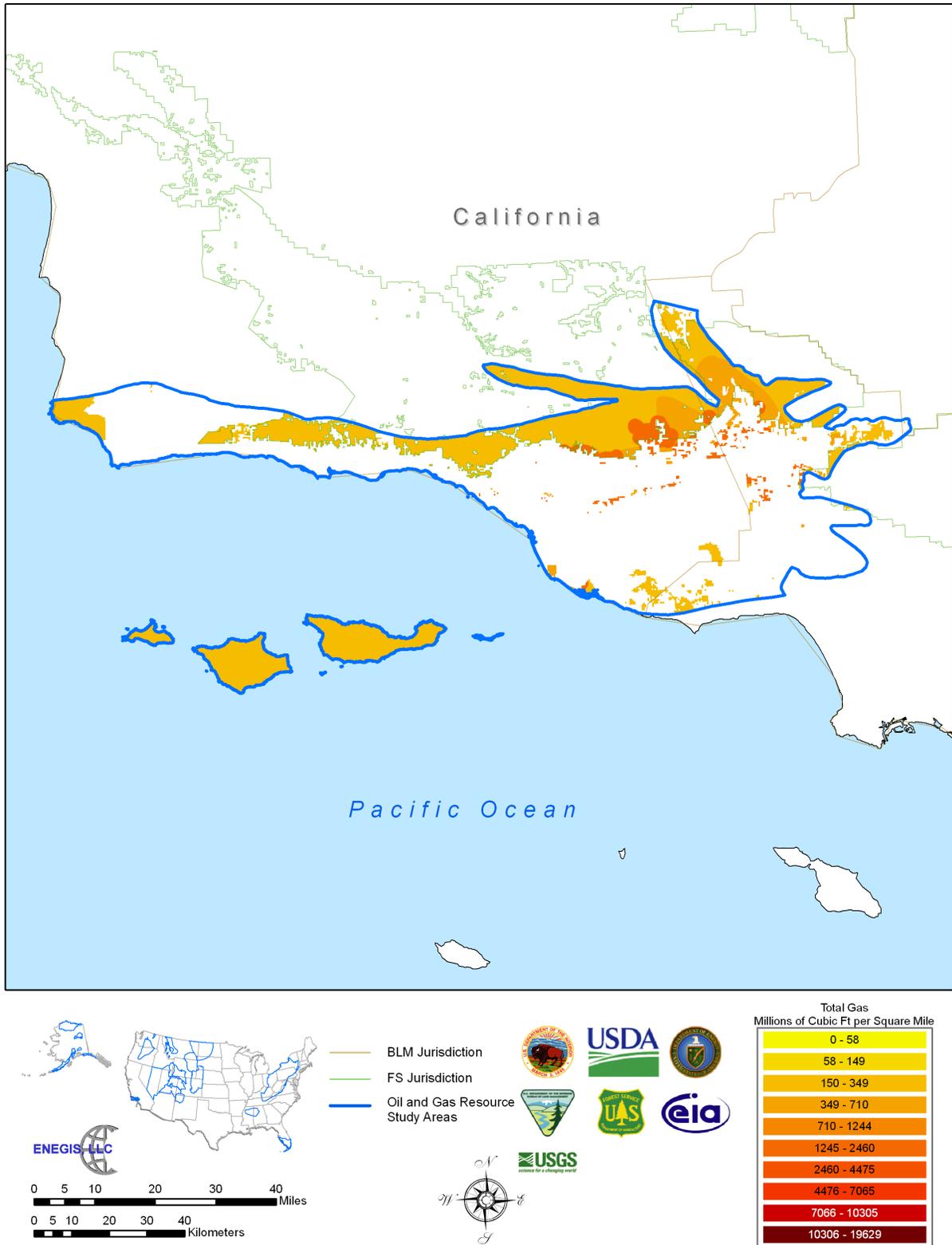


Figure 3-27. Map of Total Federal Natural Gas, Ventura Basin Study Area

Table 3-7. Eastern Great Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
 More Constrained Less Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	4,281	7.8%	98	7.2%	17	8.6%
	2.	No Leasing (Administrative) (NLA)	6,577	12.1%	174	12.8%	23	11.1%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	15,052	27.6%	379	28.0%	55	27.0%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	2,029	3.7%	16	1.2%	4	2.0%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	28	0.1%	0	0.0%	0	0.1%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	150	0.3%	4	0.3%	1	0.3%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	2,331	4.3%	64	4.7%	9	4.5%
	8.	Leasing, Controlled Surface Use (CSU) ^d	8,751	16.0%	242	17.9%	36	17.7%
	9.	Leasing, Standard Lease Terms (SLTs)	15,354	28.1%	378	27.9%	59	28.7%
Total, Federal Lands including Split Estate			54,553	100.0%	1,356	100.0%	204	100.0%
Total Non-Federal			14,331		325		60	
Total Inventory Area			68,884		1,681		264	
Summary								
Inaccessible (Categories 1-4)			27,940	51%	668	49%	99	49%
Accessible with Restrictions (Categories 5-8)			11,259	21%	310	23%	46	23%
Accessible under Standard Lease Terms (Category 9)			15,354	28%	378	28%	59	29%
Total, Federal Lands Including Split Estate			54,553	100%	1,356	100%	204	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

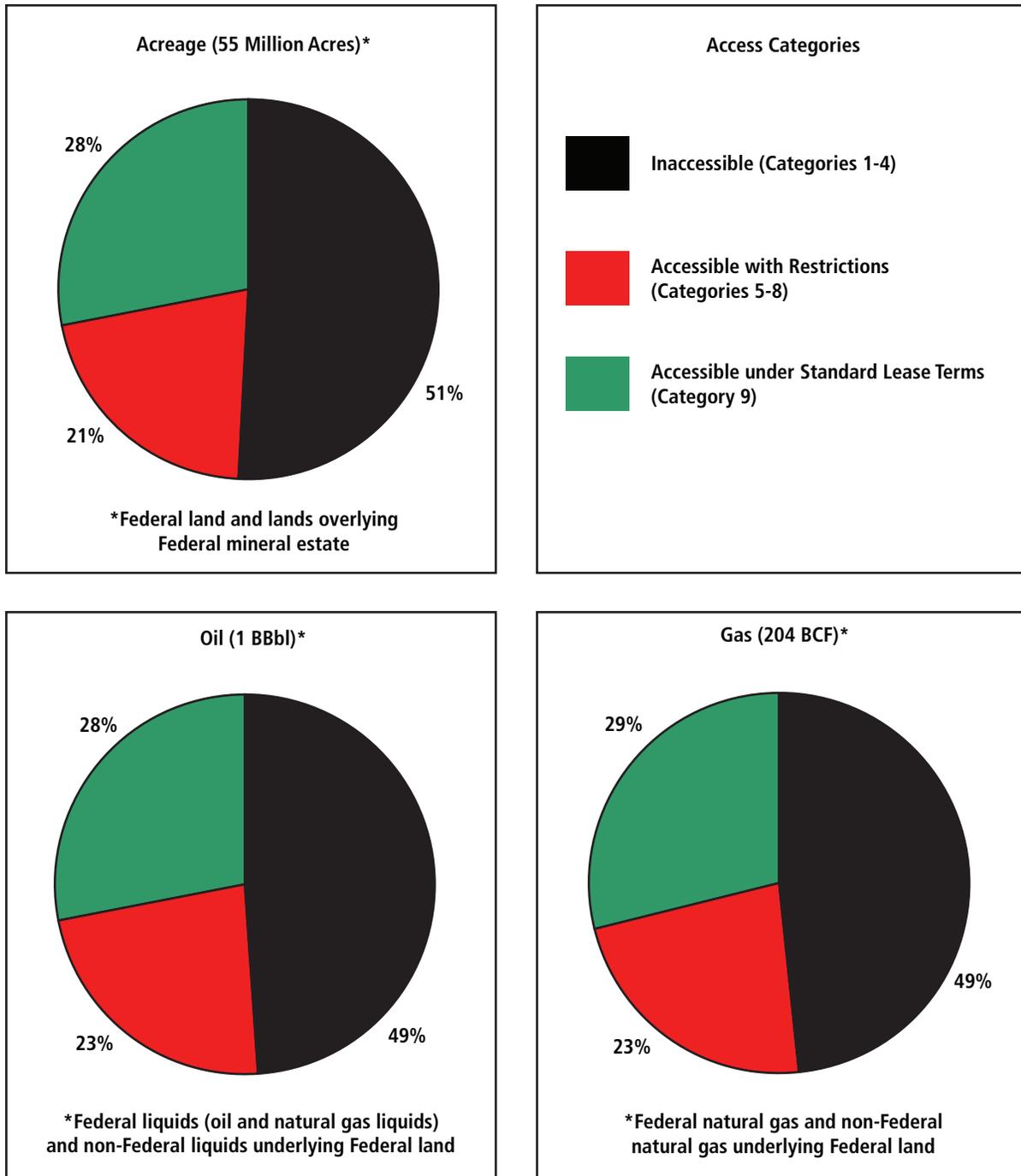


Figure 3-28. Simplified Chart of Results, Eastern Great Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

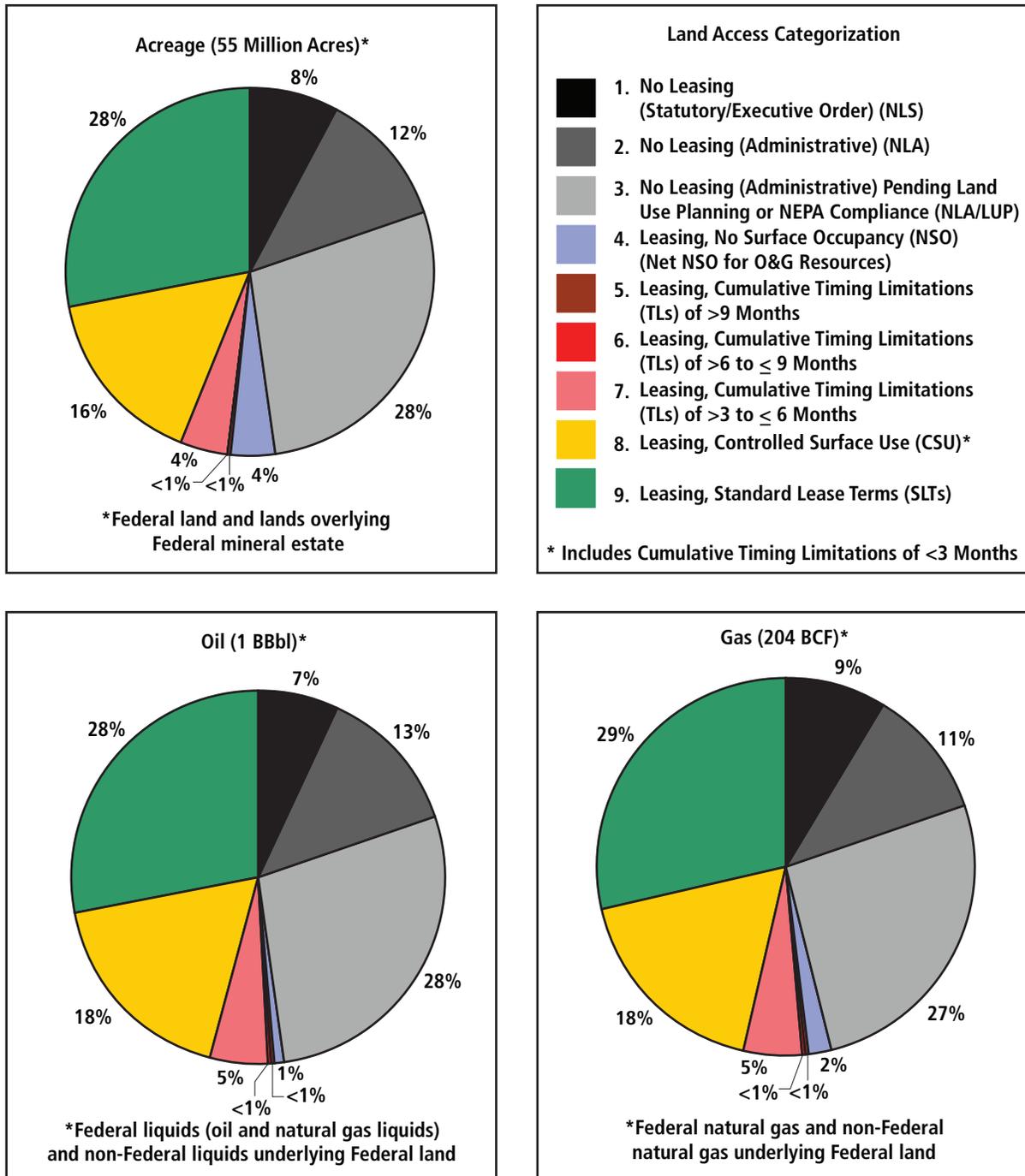


Figure 3-29. Chart of Results, Eastern Great Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

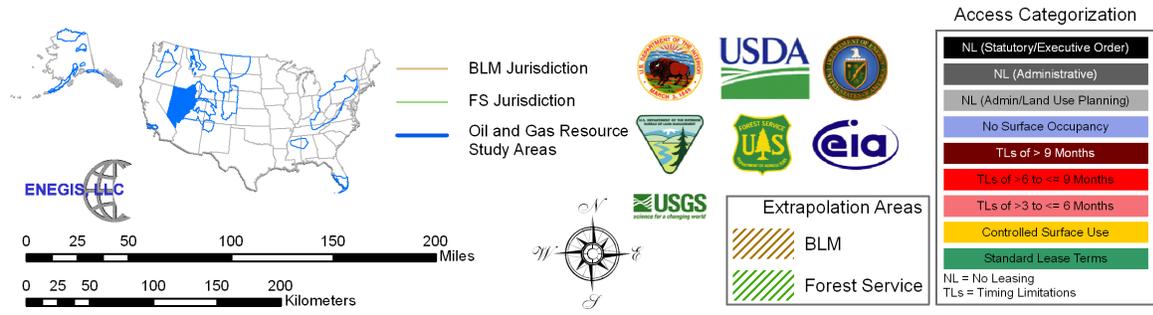
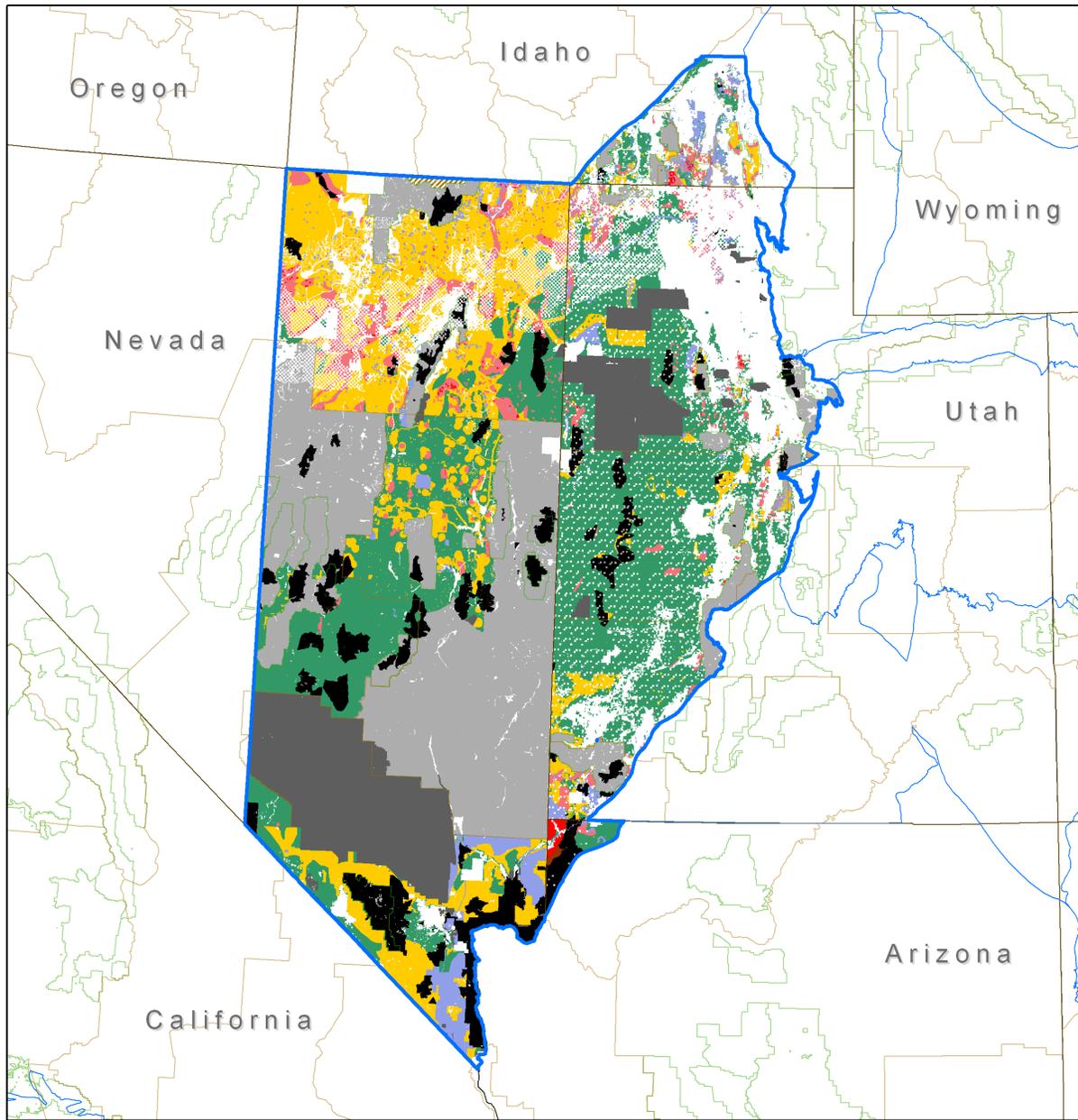


Figure 3-30. Federal Land Access Categorization Map, Eastern Great Basin Study Area

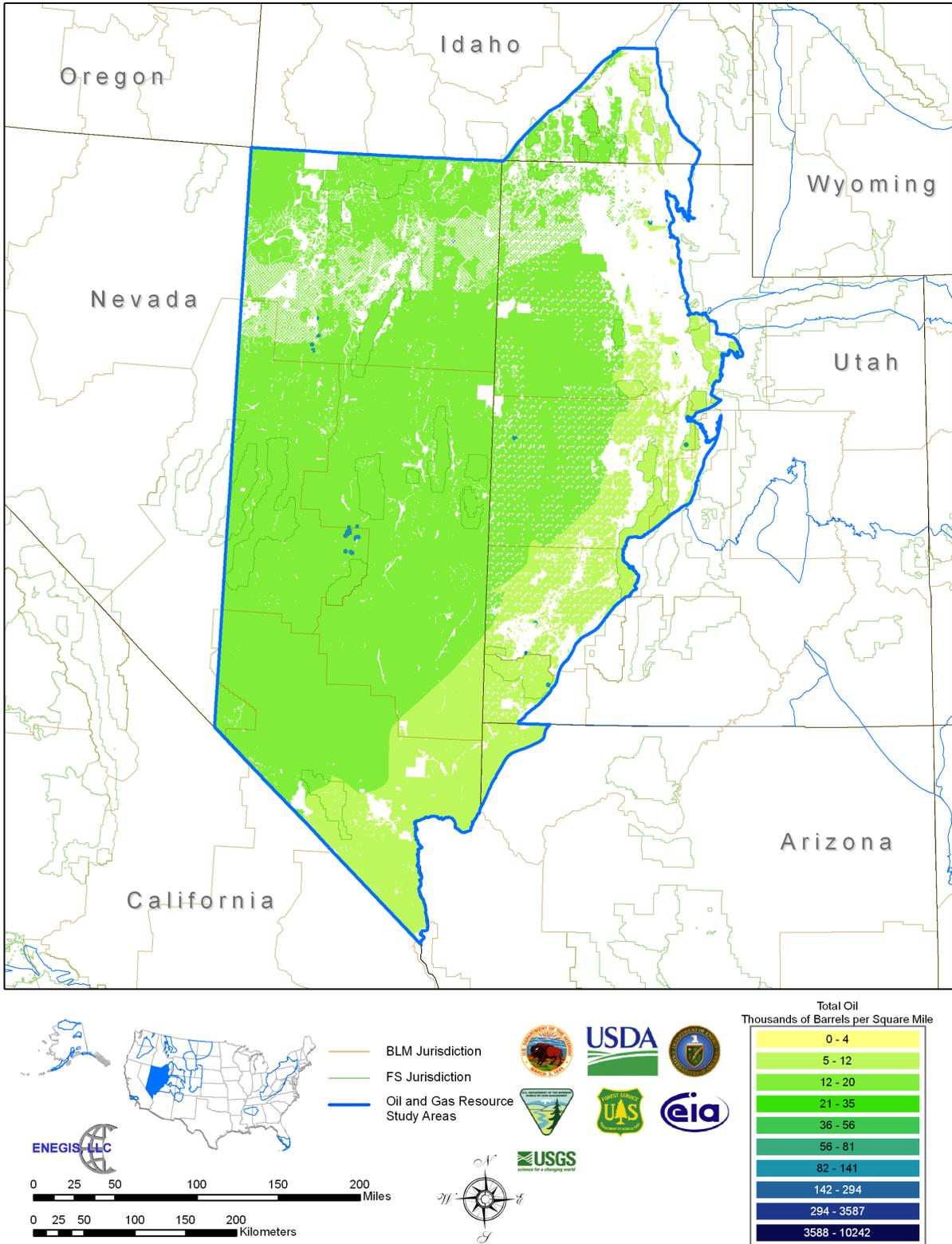


Figure 3-31. Map of Total Federal Oil, Eastern Great Basin Study Area

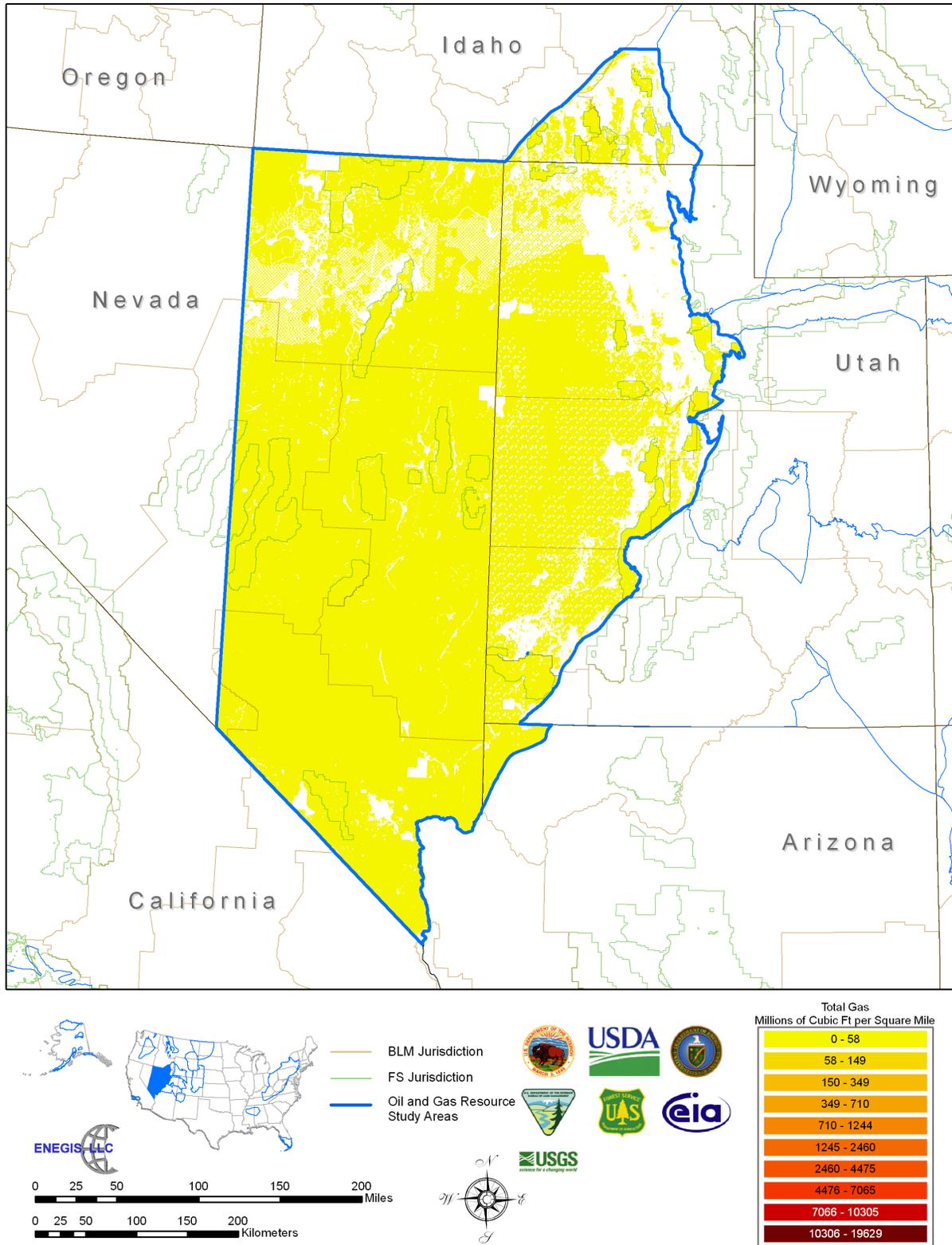


Figure 3-32. Map of Total Federal Natural Gas, Eastern Great Basin Study Area

- Approximately 27 percent (3.5 million acres) of the Federal land is accessible under standard lease terms (Figures 3-33 and 3-34, Category 9). Based on resource estimates, these lands contain 26 percent (96.2 MMbbls) of the Federal oil and 22 percent (3,088 BCF) of the Federal natural gas.
- Most of the undiscovered natural gas (greater than 95 percent) is interpreted to be continuous (unconventional) resources.

3.1.8 Paradox Basin

- Approximately 60 percent (8.7 million acres) of the Federal land is not accessible (Figures 3-38 and 3-39, Categories 1 through 4). Based on resource estimates, these lands contain 46 percent (143.1 MMbbls) of the Federal oil and 38 percent (397.9 BCF) of the Federal natural gas.
- Approximately 14 percent (2.0 million acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-38 and 3-39, Categories 5 through 8). Based on resource estimates, these lands contain 31 percent (95.7 MMbbls) of the Federal oil and 38 percent (377.4 BCF) of the Federal natural gas.
- Approximately 27 percent (3.9 million acres) of the Federal land is accessible under standard lease terms (Figures 3-38 and 3-39, Category 9). Based on resource estimates, these lands contain 23 percent (72.9 MMbbls) of the Federal oil and 26 percent (273.2 BCF) of the Federal natural gas.
- National Forests in the western part of the basin do not have current land use planning documents.

3.1.9 San Juan Basin

- Approximately 24 percent (686.2 thousand acres) of the Federal land is not accessible (Figures 3-43 and 3-44, Categories 1 through 4). Based on resource estimates, these lands contain 15 percent (22.2 MMbbls) of the Federal oil and 13 percent (3,199 BCF) of the Federal natural gas.
- Approximately 23 percent (664.2 thousand acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-43 and 3-44, Categories 5 through 8). Based on resource estimates, these lands contain 61 percent (91.3 MMbbls) of the Federal oil and 61 percent (15,267 BCF) of the Federal natural gas.
- Approximately 53 percent (1.5 million acres) of the Federal land is accessible under standard lease terms (Figures 3-43 and 3-44, Category 9). Based on resource estimates, these lands contain 25 percent (37.1 MMbbls) of the Federal oil and 26 percent (6,634 BCF) of the Federal natural gas.
- Most of the undiscovered natural gas (approximately 95 percent) is interpreted to be continuous resources.

3.1.10 Montana Thrust Belt

- Approximately 96 percent (5.4 million acres) of the Federal land is not accessible (Figures 3-48 and 3-49, Categories 1 through 4). Based on resource estimates, these lands contain 97 percent (165.3 MMbbls) of the Federal oil and 99 percent (6.2 TCF) of the Federal natural gas.

Table 3-8. Uinta-Piceance Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
More Constrained ↑ Less Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	1,631	12.4%	26	7.1%	759	5.4%
	2.	No Leasing (Administrative) (NLA)	655	5.0%	7	2.0%	482	3.4%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	889	6.8%	7	2.0%	543	3.8%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	2,126	16.2%	12	3.3%	459	3.3%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	110	0.8%	4	1.1%	111	0.8%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	371	2.8%	19	5.1%	775	5.5%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	1,216	9.3%	69	18.8%	3,156	22.4%
	8.	Leasing, Controlled Surface Use (CSU) ^d	2,560	19.5%	126	34.4%	4,738	33.6%
	9.	Leasing, Standard Lease Terms (SLTs)	3,549	27.1%	96	26.2%	3,088	21.9%
Total, Federal Lands including Split Estate			13,106	100.0%	367	100.0%	14,111	100.0%
Total Non-Federal			5,859		221		10,903	
Total Inventory Area			18,965		588		25,013	
Summary								
Inaccessible (Categories 1-4)			5,301	40%	53	14%	2,243	16%
Accessible with Restrictions (Categories 5-8)			4,256	32%	218	59%	8,780	62%
Accessible under Standard Lease Terms (Category 9)			3,549	27%	96	26%	3,088	22%
Total, Federal Lands Including Split Estate			13,106	100%	367	100%	14,111	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

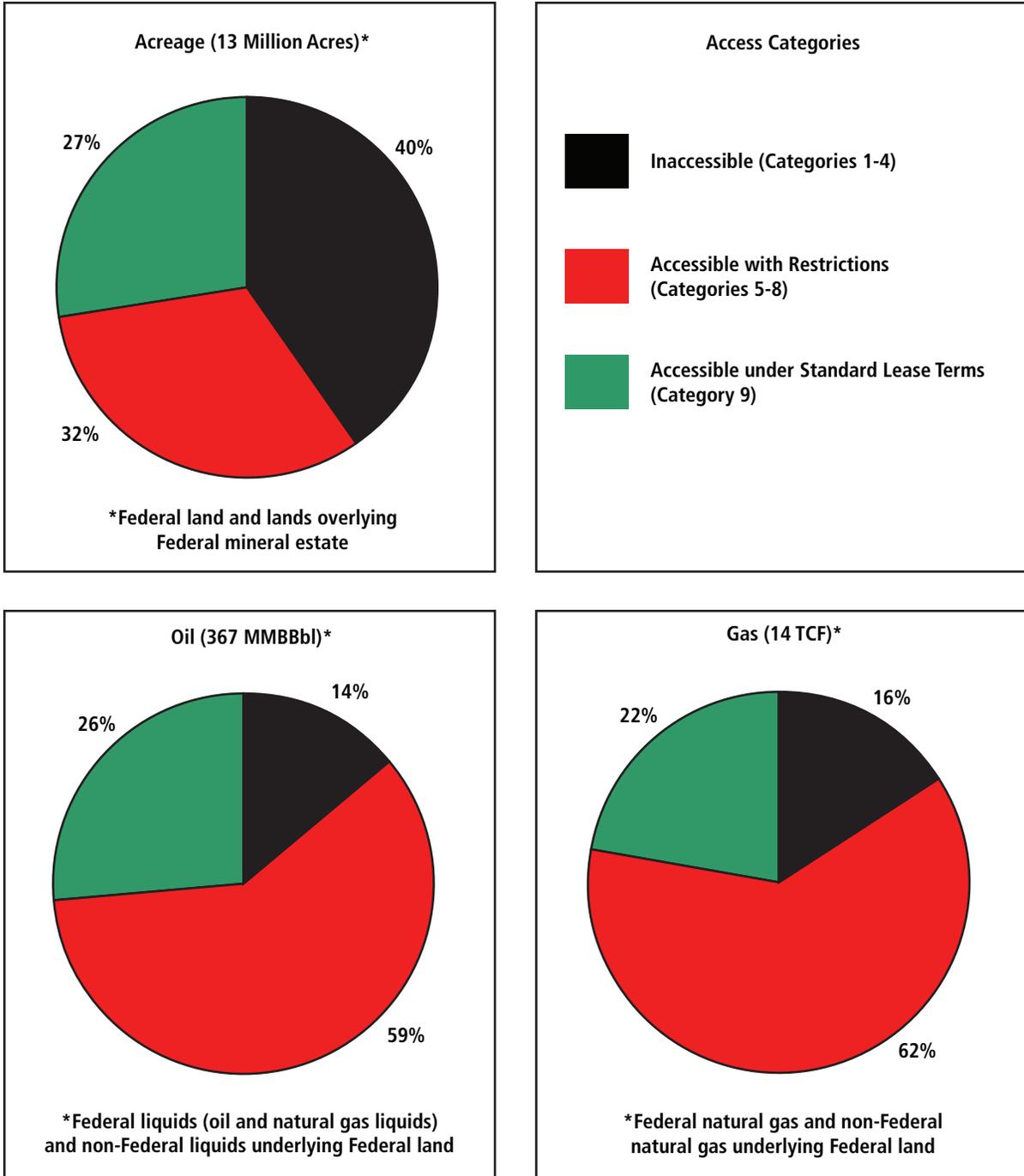


Figure 3-33. Simplified Chart of Results, Uinta-Piceance Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

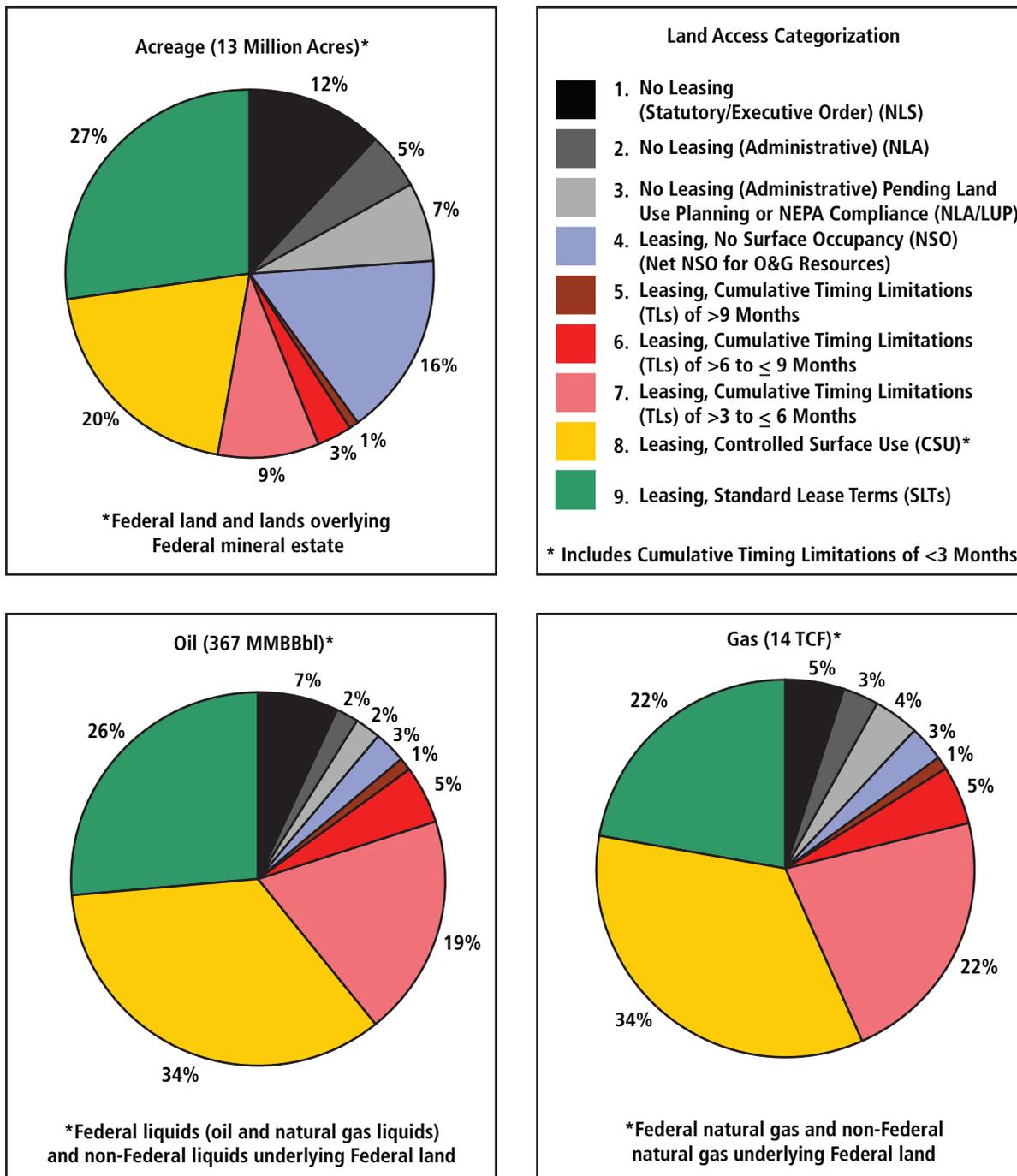


Figure 3-34. Chart of Results, Uinta-Piceance Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

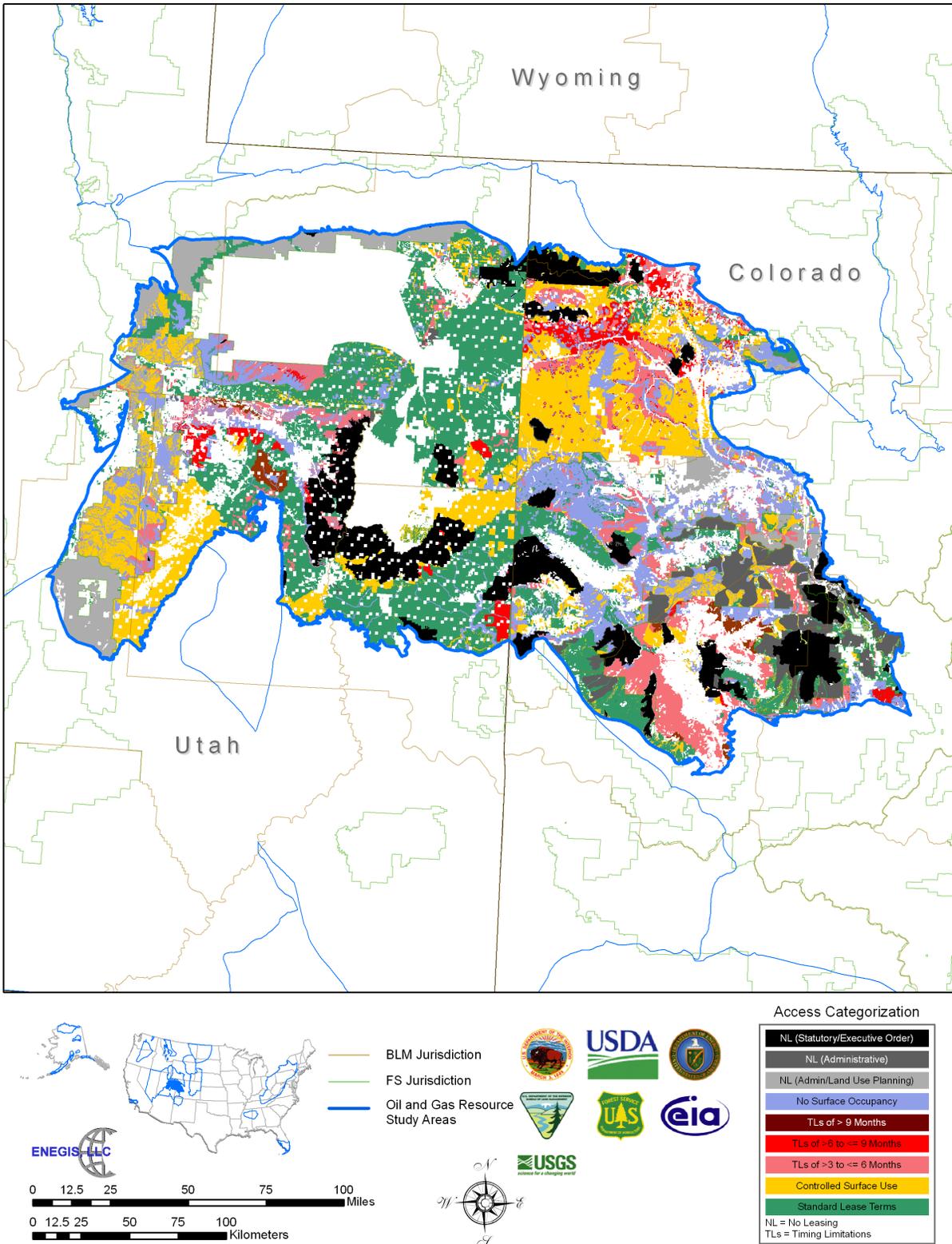


Figure 3-35. Federal Land Access Categorization Map, Uinta-Piceance Basin Study Area

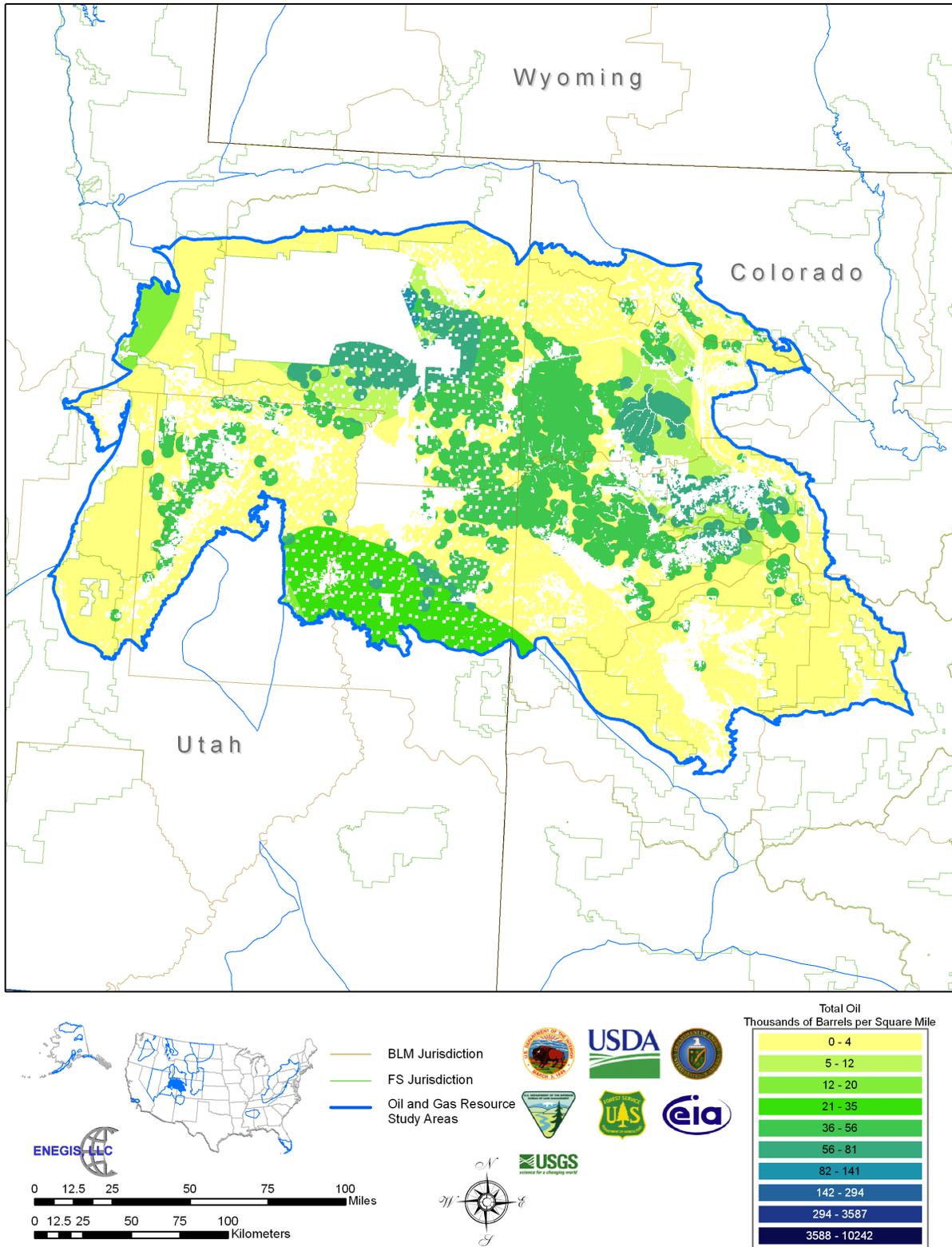


Figure 3-36. Map of Total Federal Oil, Uinta-Piceance Basin Study Area

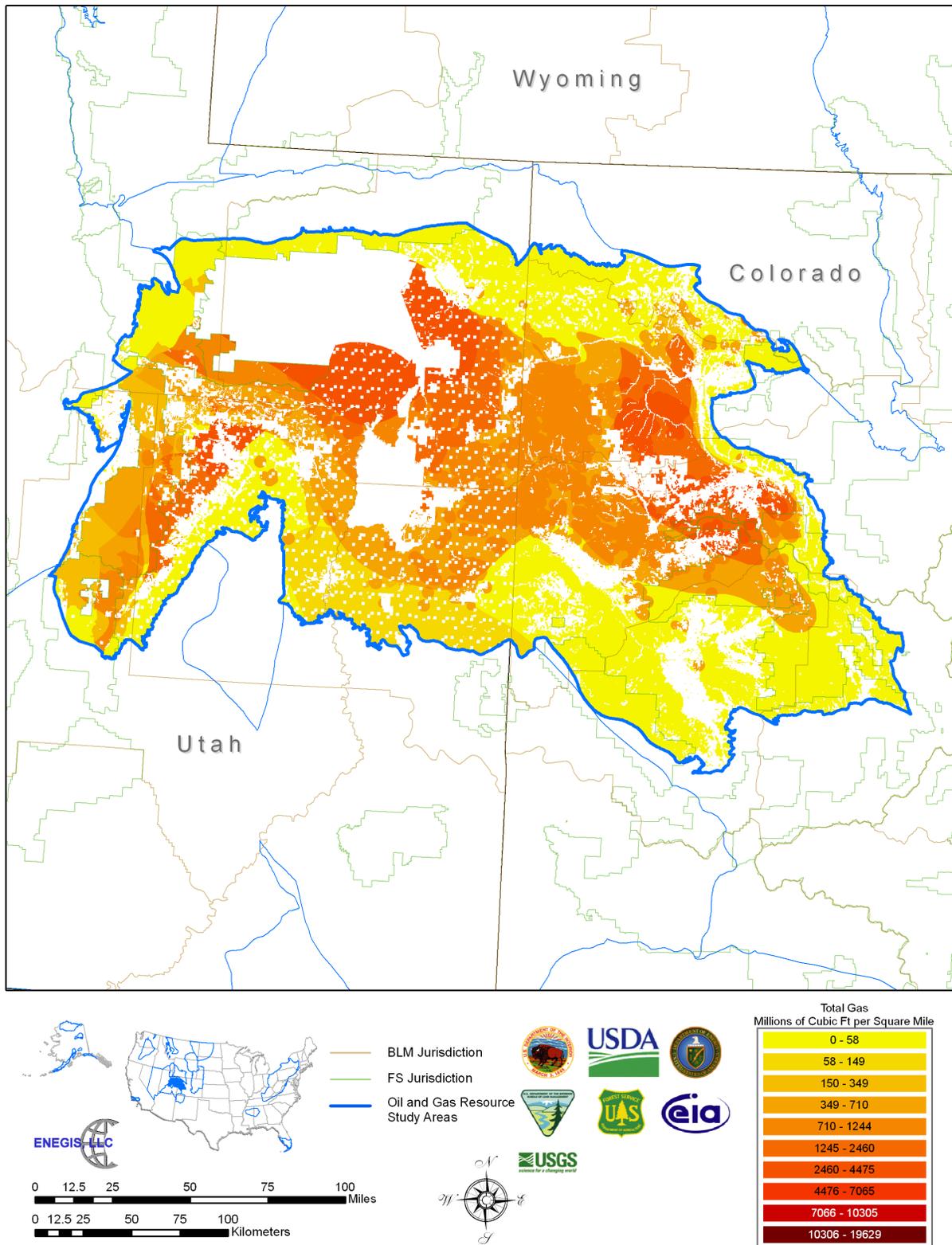


Figure 3-37. Map of Total Federal Natural Gas, Uinta-Piceance Basin Study Area

Table 3-9. Paradox Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
Less Constrained ↑ More Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	5,194	35.5%	82	26.2%	198	18.8%
	2.	No Leasing (Administrative) (NLA)	196	1.3%	7	2.3%	21	2.0%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	2,851	19.5%	45	14.5%	153	14.6%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	457	3.1%	9	2.9%	26	2.5%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	-	0.0%	-	0.0%	-	0.0%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	28	0.2%	4	1.4%	20	1.9%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	776	5.3%	39	12.6%	173	16.5%
	8.	Leasing, Controlled Surface Use (CSU) ^d	1,235	8.5%	52	16.7%	185	17.6%
	9.	Leasing, Standard Lease Terms (SLTs)	3,878	26.5%	73	23.4%	273	26.1%
Total, Federal Lands including Split Estate			14,616	100.0%	312	100.0%	1,048	100.0%
Total Non-Federal			4,897		138		515	
Total Inventory Area			19,513		450		1,563	
Summary								
Inaccessible (Categories 1-4)			8,698	60%	143	46%	398	38%
Accessible with Restrictions (Categories 5-8)			2,040	14%	96	31%	377	36%
Accessible under Standard Lease Terms (Category 9)			3,878	27%	73	23%	273	26%
Total, Federal Lands Including Split Estate			14,616	100%	312	100%	1,048	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs^c Including associated dissolved and nonassociated natural gas^d Includes Cumulative Timing Limitations of ≤3 months

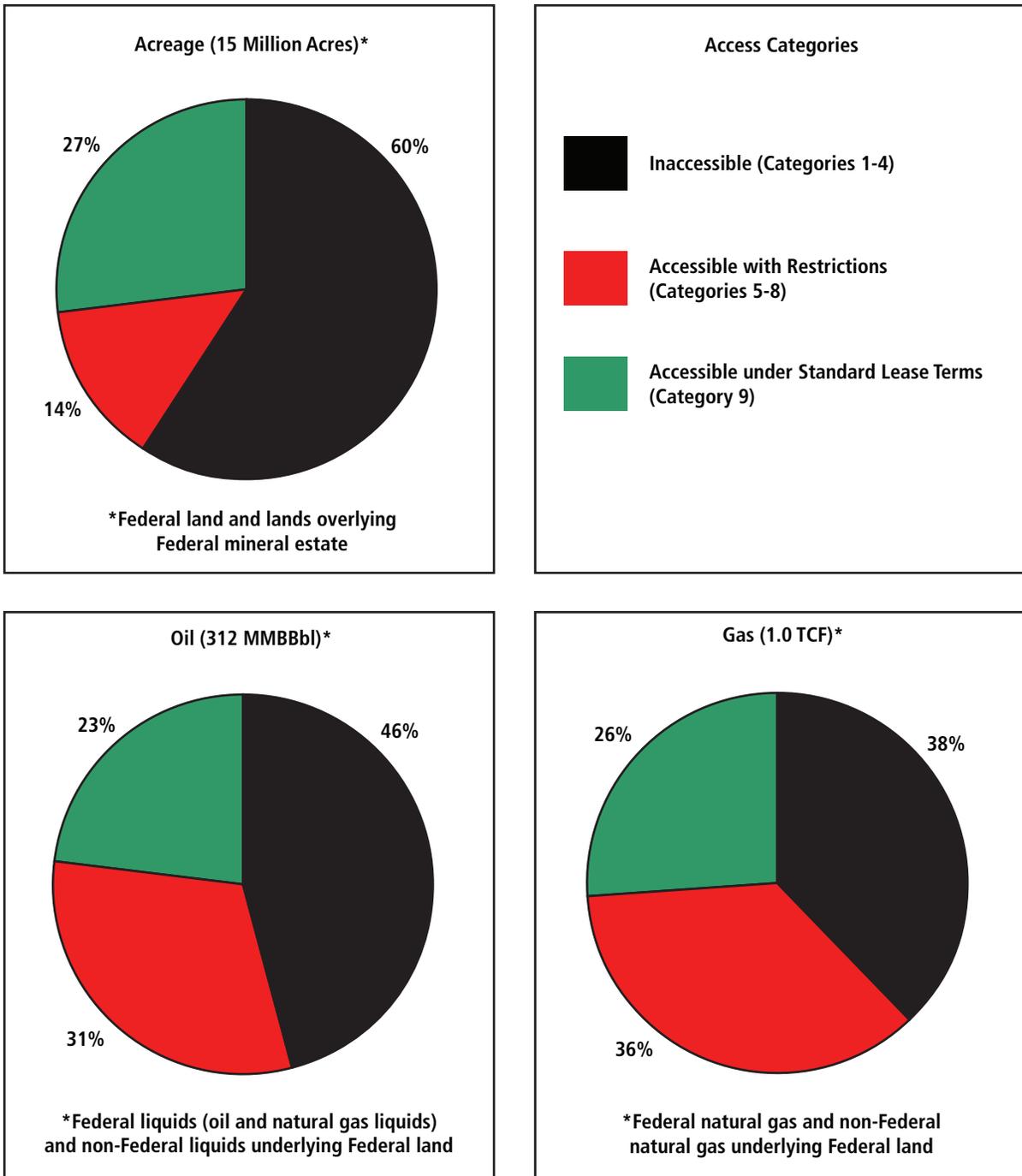


Figure 3-38. Simplified Chart of Results, Paradox Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

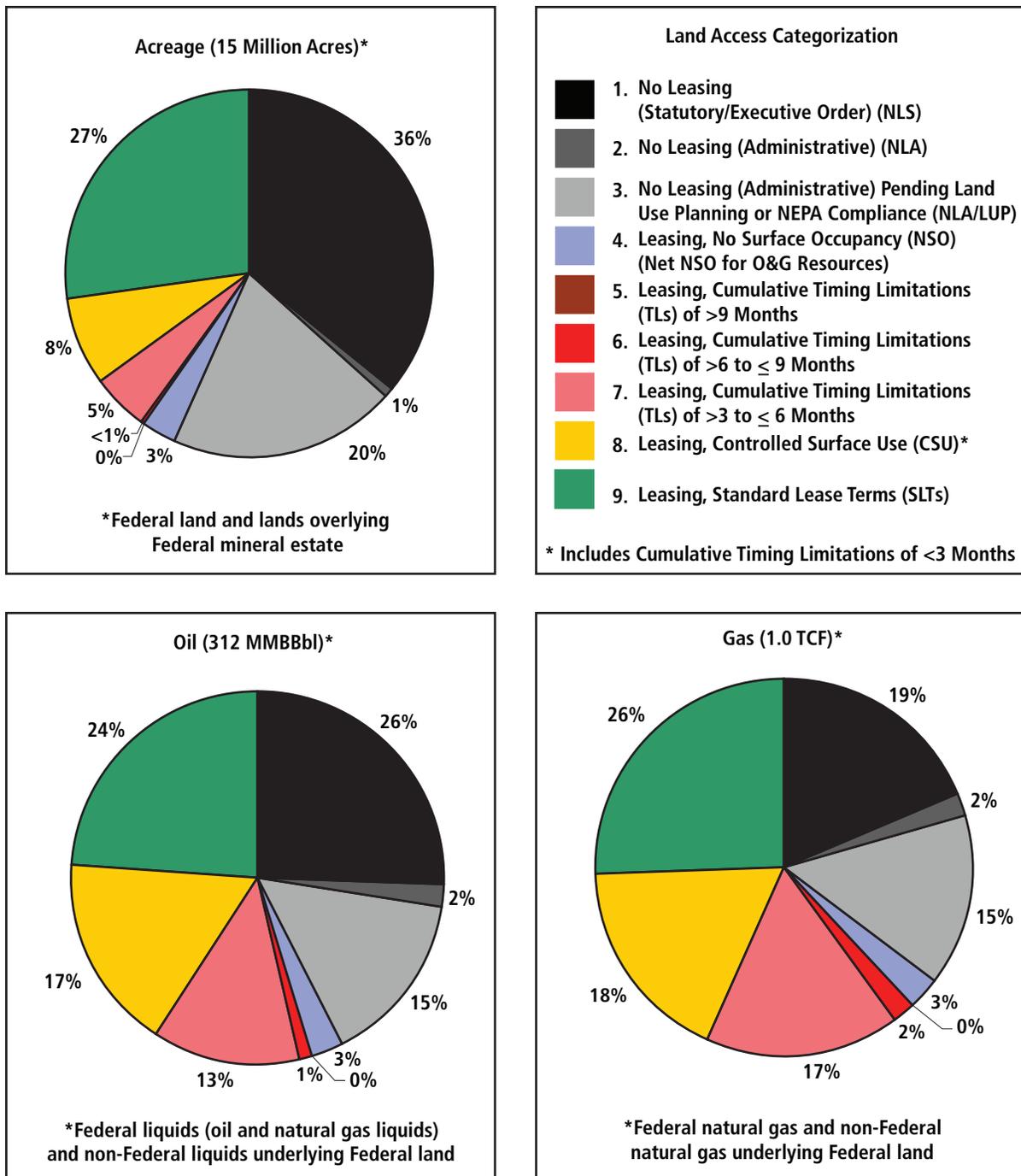


Figure 3-39. Chart of Results, Paradox Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

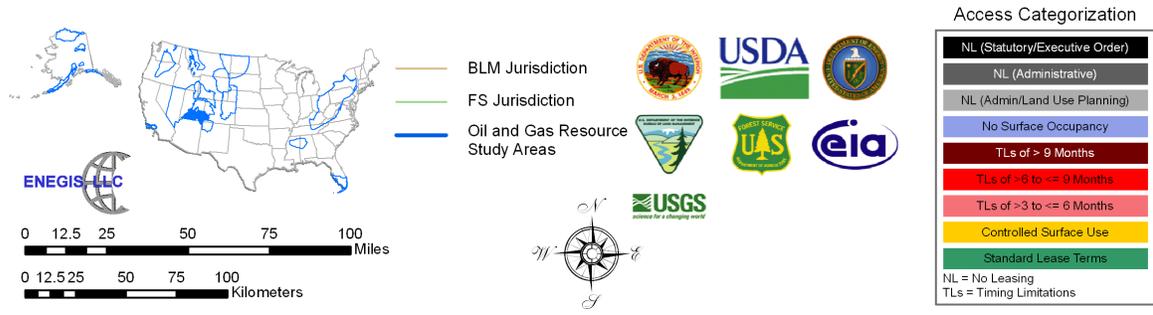
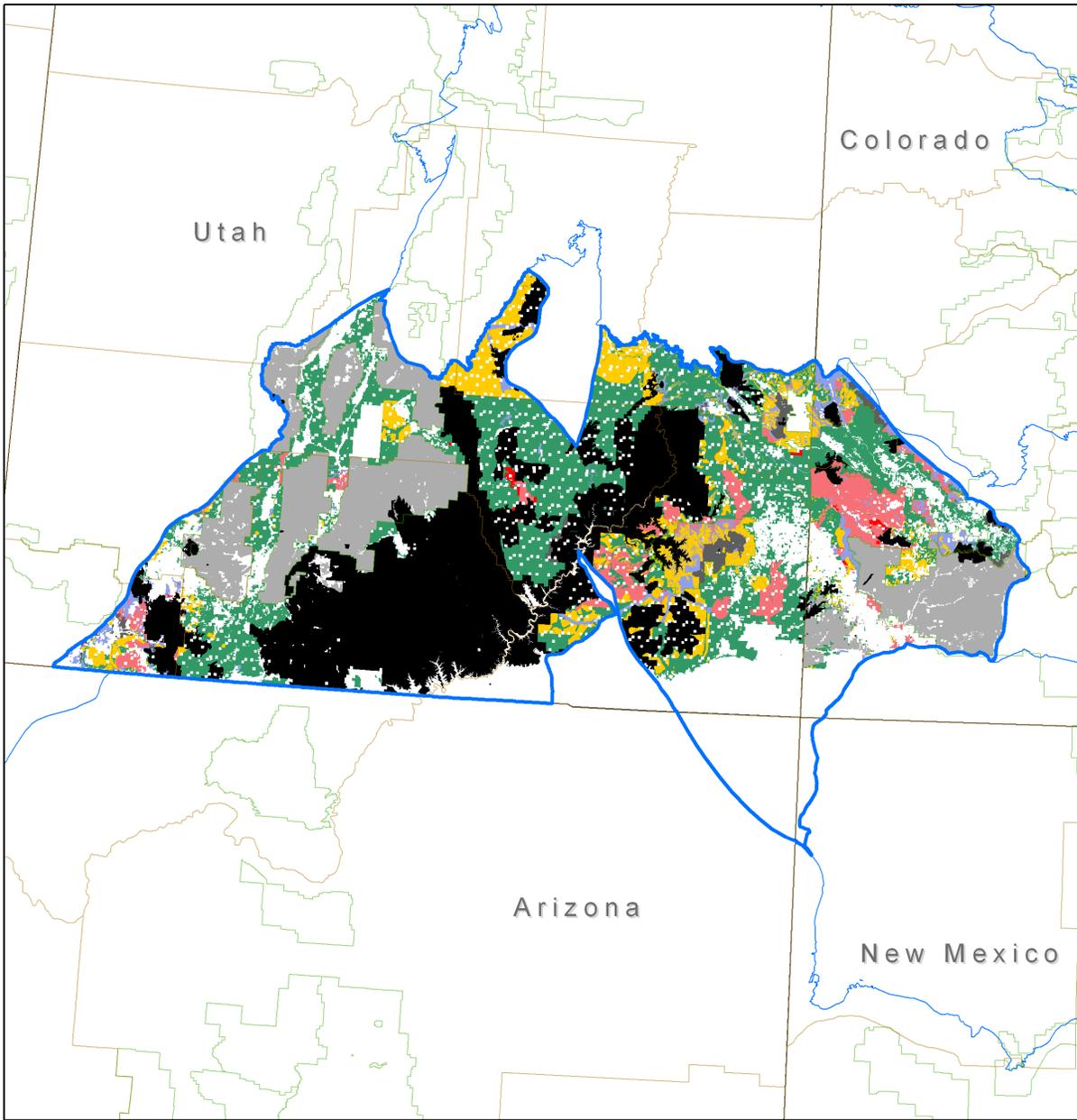


Figure 3-40. Federal Land Access Categorization Map, Paradox Basin Study Area

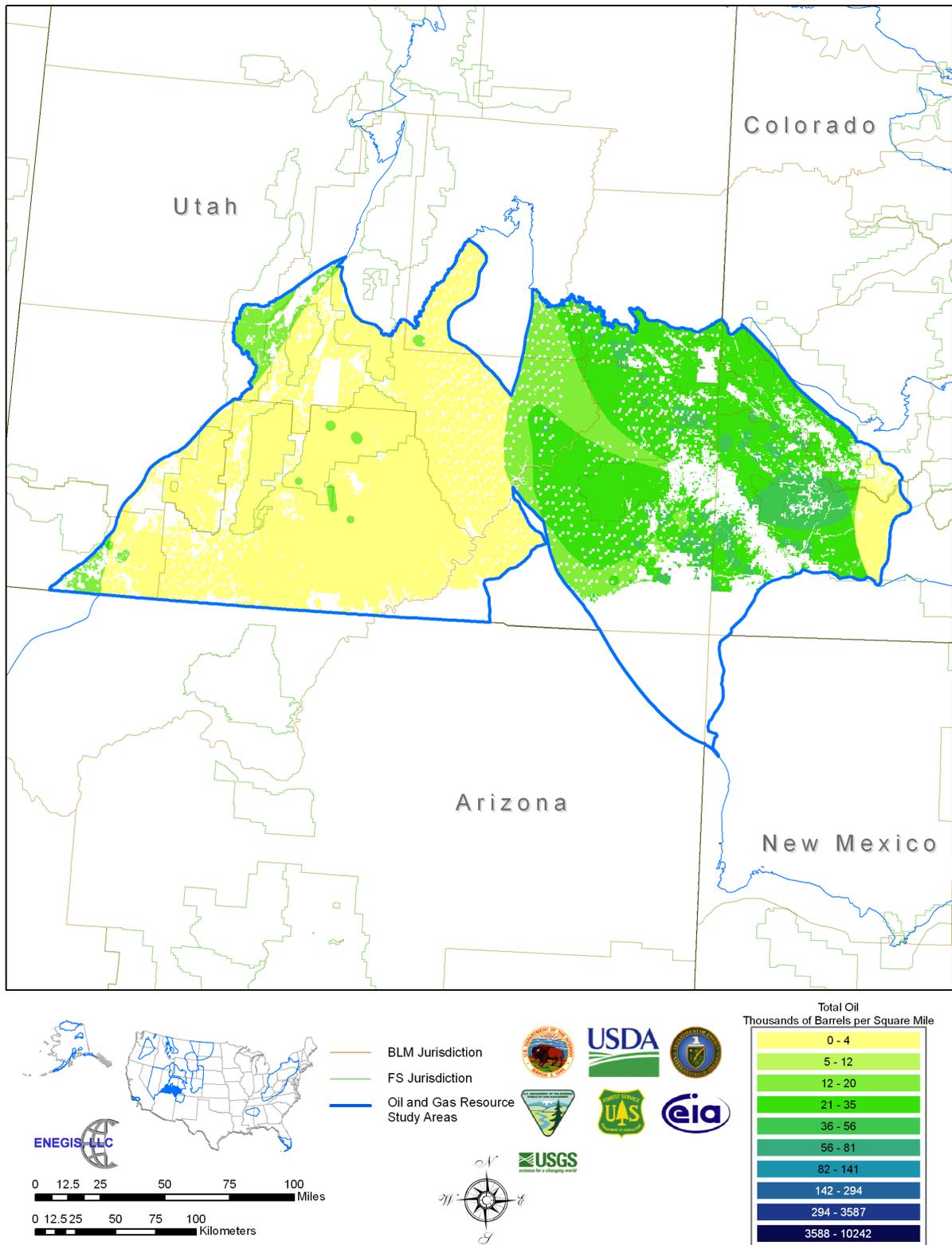


Figure 3-41. Map of Total Federal Oil, Paradox Basin Study Area

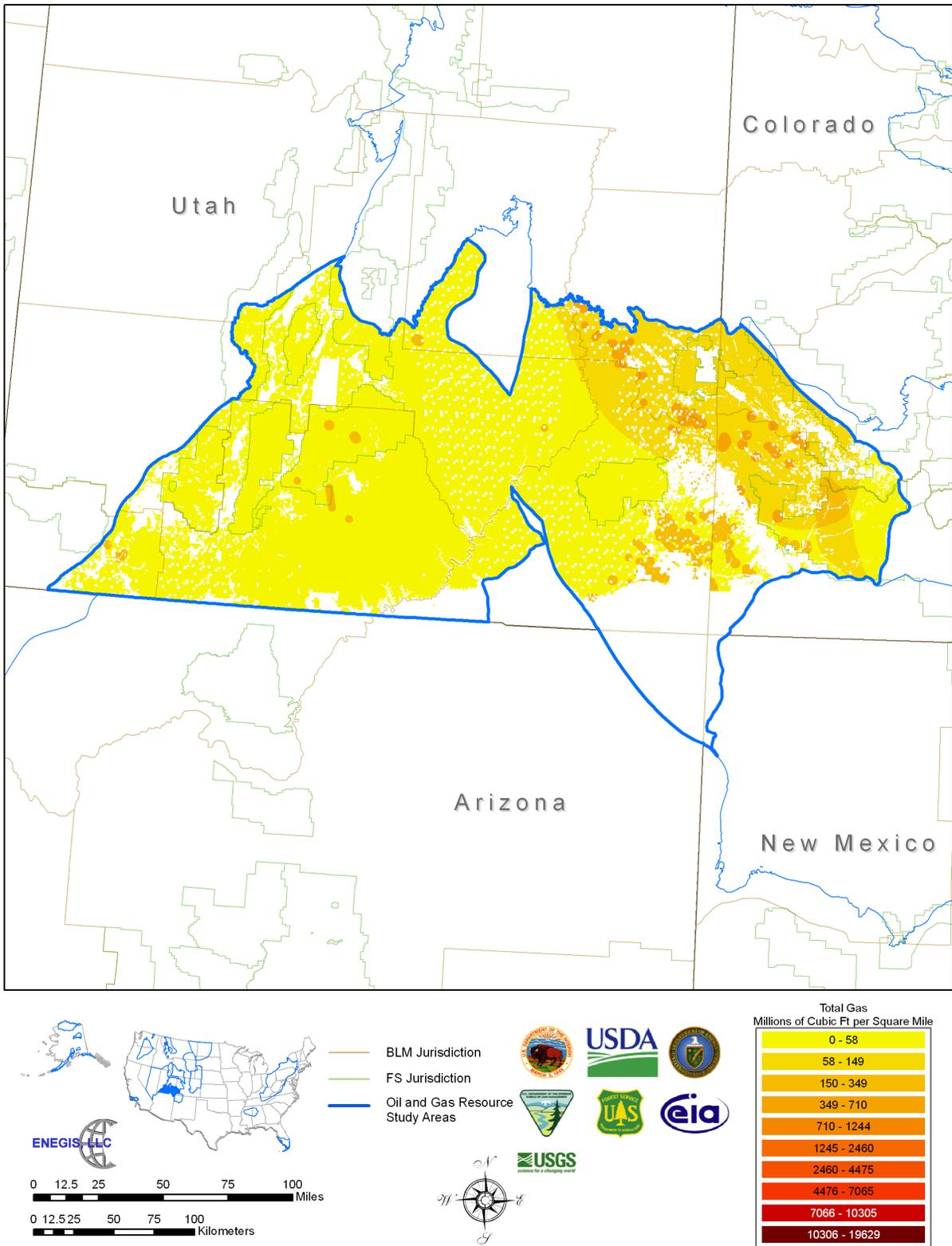


Figure 3-42. Map of Total Federal Natural Gas, Paradox Basin Study Area

Table 3-10. San Juan Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
	1.	No Leasing (Statutory/ Executive Order) (NLS)	213	7.5%	6	3.8%	425	1.7%
	2.	No Leasing (Administrative) (NLA)	60	2.1%	4	2.4%	488	1.9%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	325	11.4%	9	5.8%	1,630	6.5%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	88	3.1%	4	2.7%	656	2.6%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	-	0.0%	-	0.0%	-	0.0%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	11	0.4%	1	0.9%	202	0.8%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	269	9.4%	31	20.8%	5,844	23.3%
	8.	Leasing, Controlled Surface Use (CSU) ^d	385	13.5%	59	39.0%	9,221	36.7%
	9.	Leasing, Standard Lease Terms (SLTs)	1,509	52.8%	37	24.6%	6,634	26.4%
Total, Federal Lands including Split Estate			2,860	100.0%	151	100.0%	25,100	100.0%
Total Non-Federal			6,152		214		27,501	
Total Inventory Area			9,012		365		52,601	
Summary								
Inaccessible (Categories 1-4)			686	24%	22	15%	3,199	13%
Accessible with Restrictions (Categories 5-8)			664	23%	91	61%	15,267	61%
Accessible under Standard Lease Terms (Category 9)			1,509	53%	37	25%	6,634	26%
Total, Federal Lands Including Split Estate			2,860	100%	151	100%	25,100	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

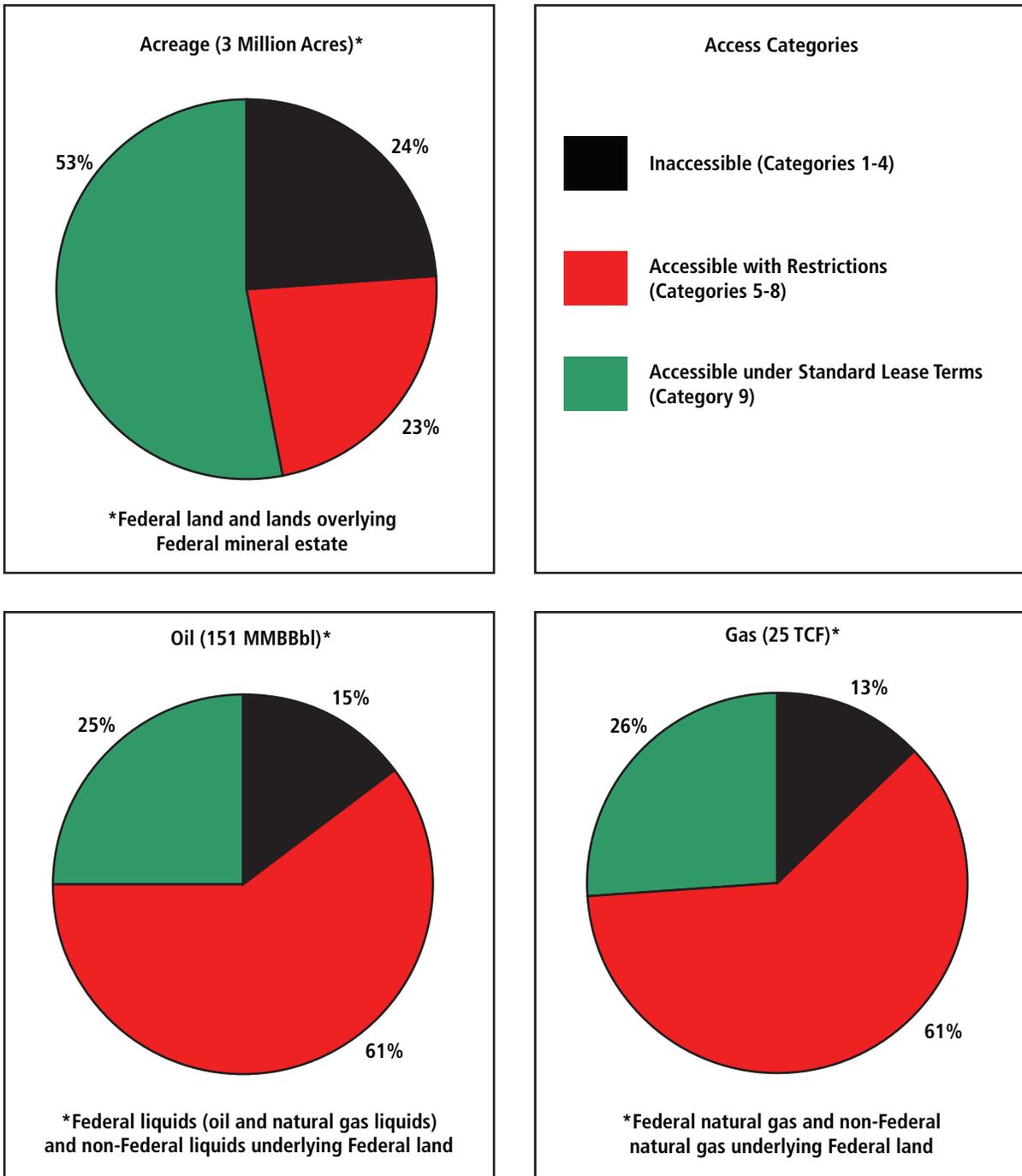


Figure 3-43. Simplified Chart of Results, San Juan Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

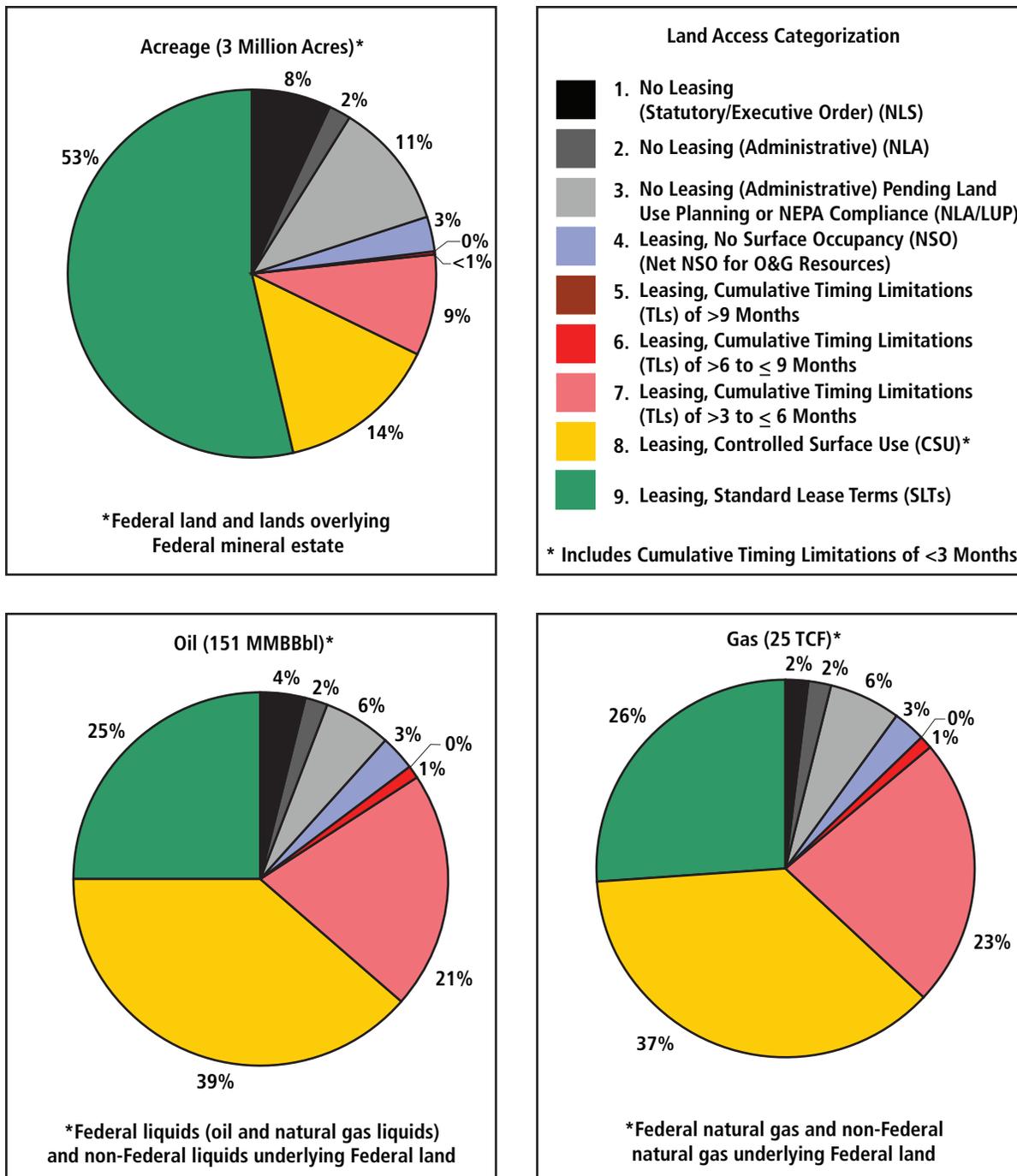


Figure 3-44. Chart of Results, San Juan Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

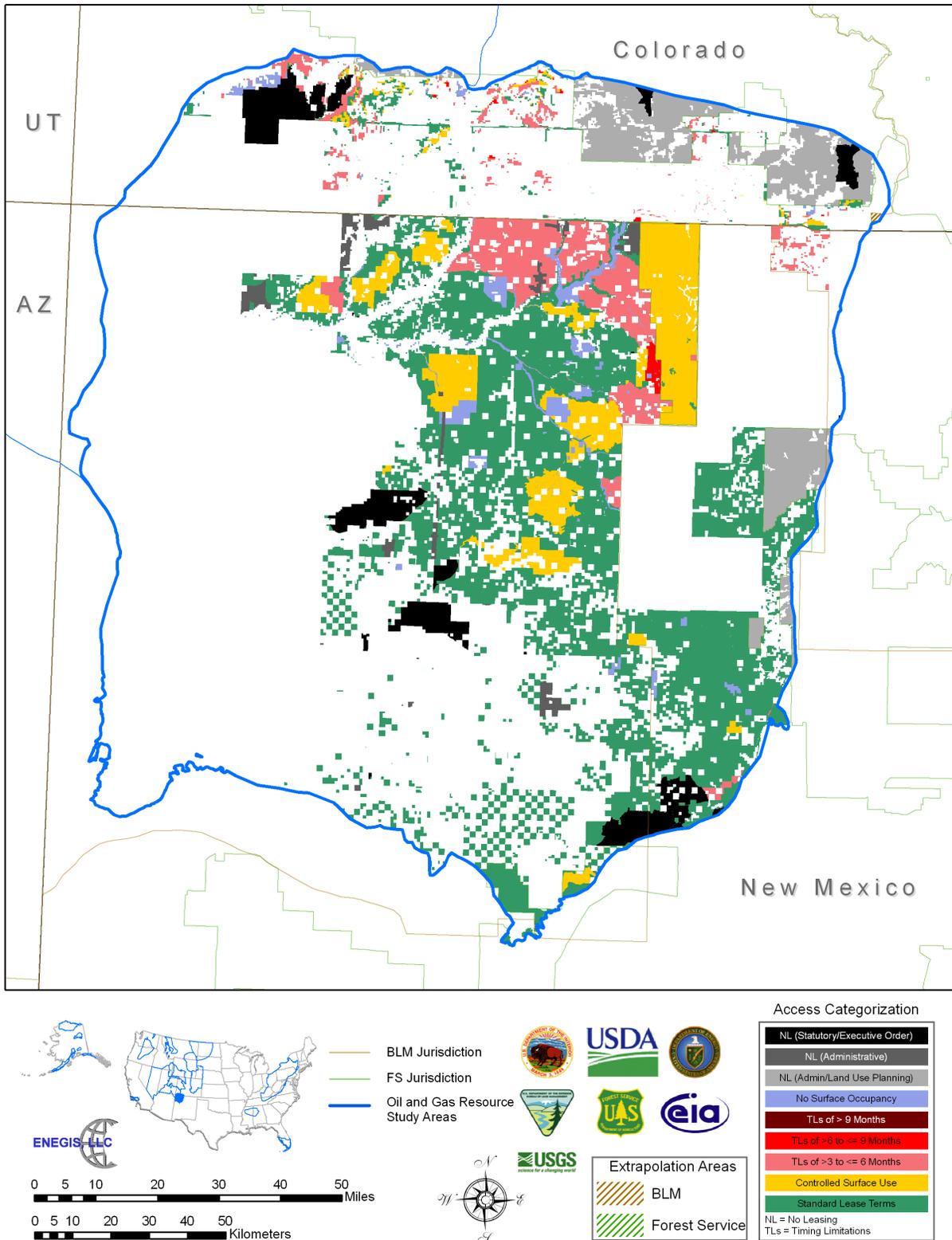


Figure 3-45. Federal Land Access Categorization Map, San Juan Basin Study Area

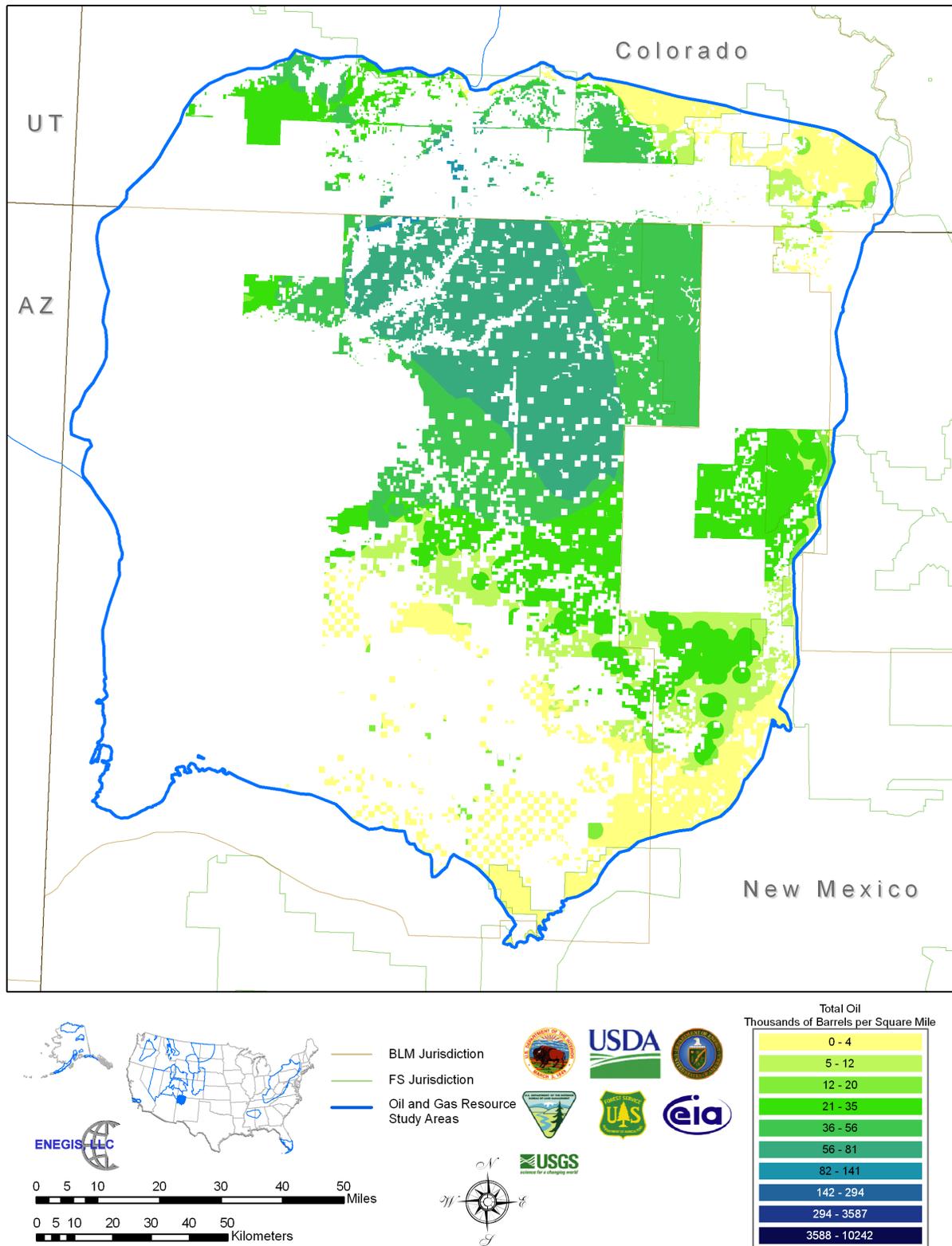


Figure 3-46. Map of Total Federal Oil, San Juan Basin Study Area

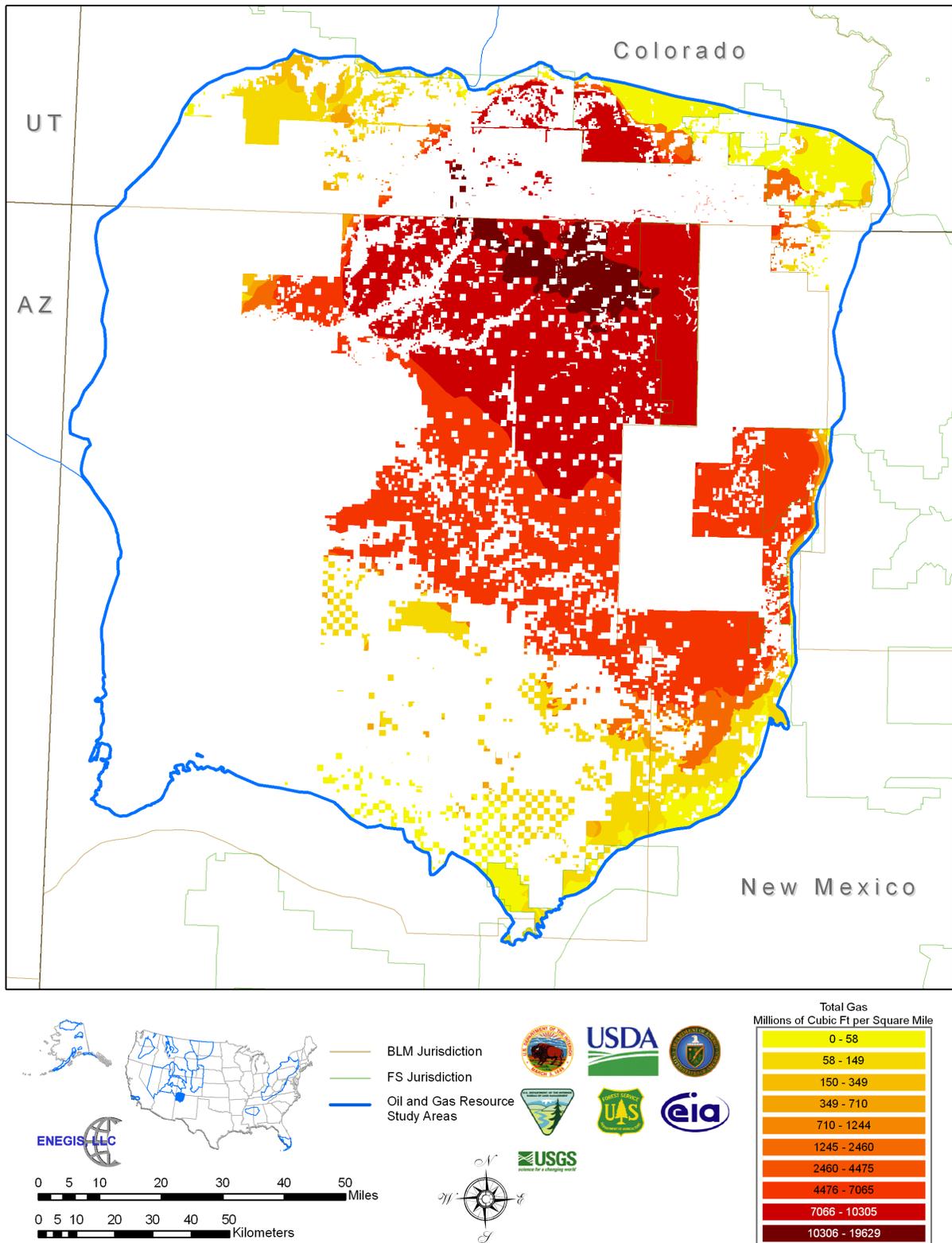


Figure 3-47. Map of Total Federal Natural Gas, San Juan Basin Study Area

- Approximately 3 percent (152.1 thousand acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-48 and 3-49, Categories 5 through 8). Based on resource estimates, these lands contain 3 percent (4.3 MMbbls) of the Federal oil and 1 percent (43.0 BCF) of the Federal natural gas.
- Approximately 1 percent (75.6 thousand acres) of the Federal land is accessible under standard lease terms (Figures 3-48 and 3-49, Category 9). Based on resource estimates, these lands contain 1 percent (0.9 MMbbls) of the Federal oil and less than 1 percent (22.2 BCF) of the Federal natural gas.
- The USDA-Forest Service is the primary land management agency in the Montana Thrust Belt, with 71 percent of the Federal lands. Almost half of the land that is currently not being leased is undergoing new land use planning.
- Approximately 32 percent (1.7 million acres) of the Federal land is accessible under standard lease terms (Figures 3-53 and 3-54, Category 9). Based on resource estimates, these lands contain 28 percent (102.3 MMbbls) of the Federal oil and 27 percent (165.3 BCF) of the Federal natural gas.
- The majority of the natural gas is continuous-type resource, and the basin contains an active continuous-type oil play.

3.1.12 Powder River Basin

3.1.11 Williston Basin

- Approximately 26 percent (1.4 million acres) of the Federal land is not accessible (Figures 3-53 and 3-54, Categories 1 through 4). Based on resource estimates, these lands contain 34 percent (124.1 MMbbls) of the Federal oil and 34 percent (212.7 BCF) of the Federal natural gas.
- Approximately 41 percent (2.1 million acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-53 and 3-54, Categories 5 through 8). Based on resource estimates, these lands contain 38 percent (140.6 MMbbls) of the Federal oil and 27 percent (165.0 BCF) of the Federal natural gas.
- Approximately 26 percent (3.1 million acres) of the Federal land is not accessible (Figures 3-58 and 3-59, Categories 1 through 4). Based on resource estimates, these lands contain 4 percent (51 MMbbls) of the Federal oil and 10 percent (874 BCF) of the Federal natural gas.
- Approximately 47 percent (5.7 million acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-58 and 3-59, Categories 5 through 8). Based on resource estimates, these lands contain 79 percent (1,022 MMbbls) of the Federal oil and 77 percent (7,035 BCF) of the Federal natural gas in the basin.
- Approximately 27 percent (3.2 million acres) of the Federal land is accessible under standard lease terms (Figures 3-58 and 3-59, Category 9). Based on resource estimates, these lands contain 17 percent (216 MMbbls) of the Federal oil and 13 percent (1,228 BCF) of the Federal natural gas.
- Almost all of the undiscovered natural gas is expected to be found in coal beds (98 percent).

Table 3-11. Montana Thrust Belt Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
 More Constrained Less Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	2,689	47.6%	94	55.0%	3,687	58.5%
	2.	No Leasing (Administrative) (NLA)	77	1.4%	2	0.9%	48	0.8%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	2,092	37.0%	58	33.9%	2,042	32.4%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	564	10.0%	12	7.1%	466	7.4%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	1	0.0%	0	0.0%	0	0.0%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	30	0.5%	1	0.7%	11	0.2%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	115	2.0%	3	1.7%	28	0.4%
	8.	Leasing, Controlled Surface Use (CSU) ^d	6	0.1%	0	0.1%	4	0.1%
	9.	Leasing, Standard Lease Terms (SLTs)	76	1.3%	1	0.5%	22	0.4%
Total, Federal Lands including Split Estate			5,650	100.0%	171	100.0%	6,308	100.0%
Total Non-Federal			5,933		178		2,330	
Total Inventory Area			11,583		348		8,638	
Summary								
Inaccessible (Categories 1-4)			5,423	96%	165	97%	6,243	99%
Accessible with Restrictions (Categories 5-8)			152	3%	4	3%	43	1%
Accessible under Standard Lease Terms (Category 9)			76	1%	1	1%	22	0%
Total, Federal Lands Including Split Estate			5,650	100%	171	100%	6,308	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

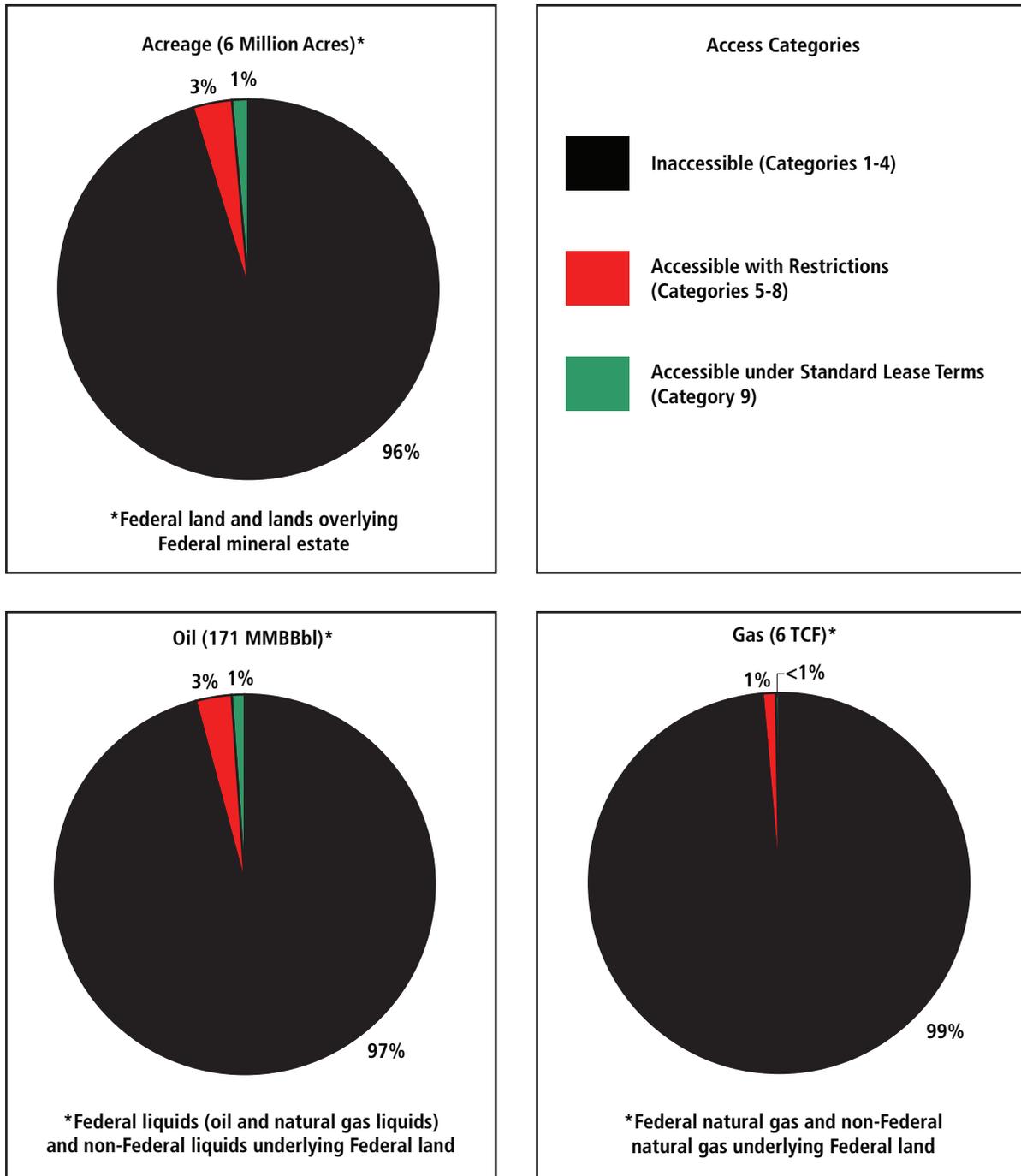


Figure 3-48. Simplified Chart of Results, Montana Thrust Belt Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

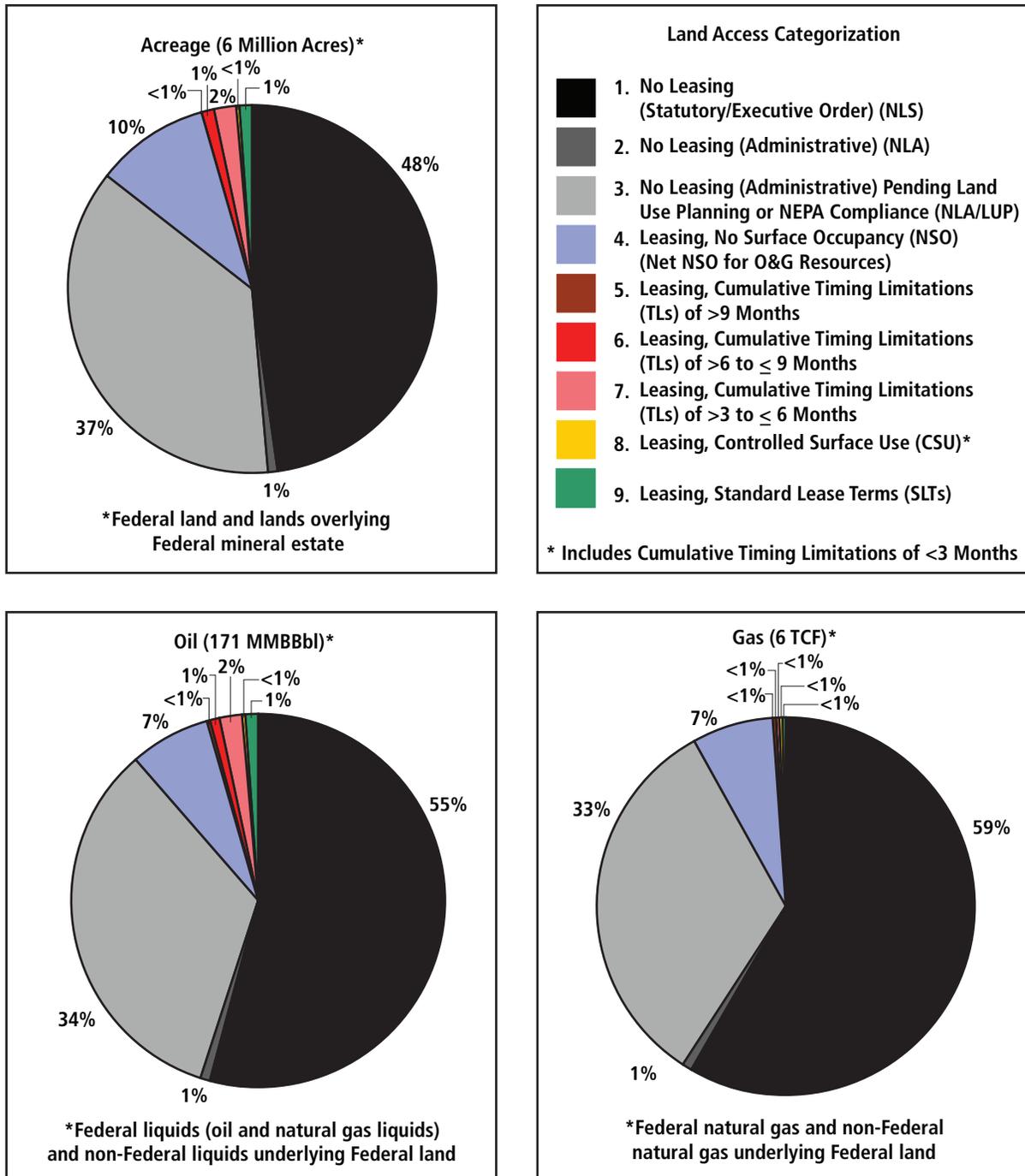


Figure 3-49. Chart of Results, Montana Thrust Belt Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

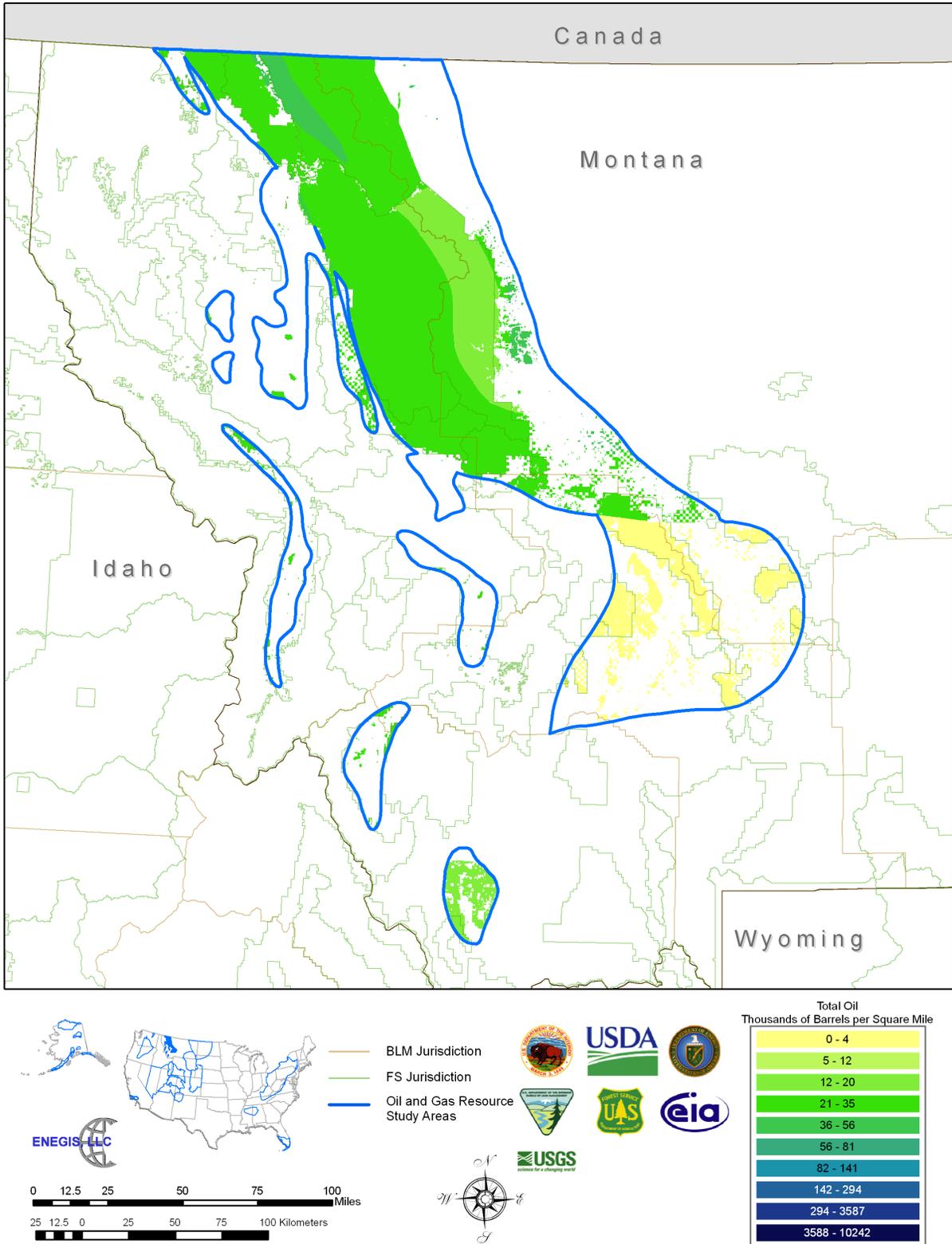


Figure 3-51. Map of Total Federal Oil, Montana Thrust Belt Study Area

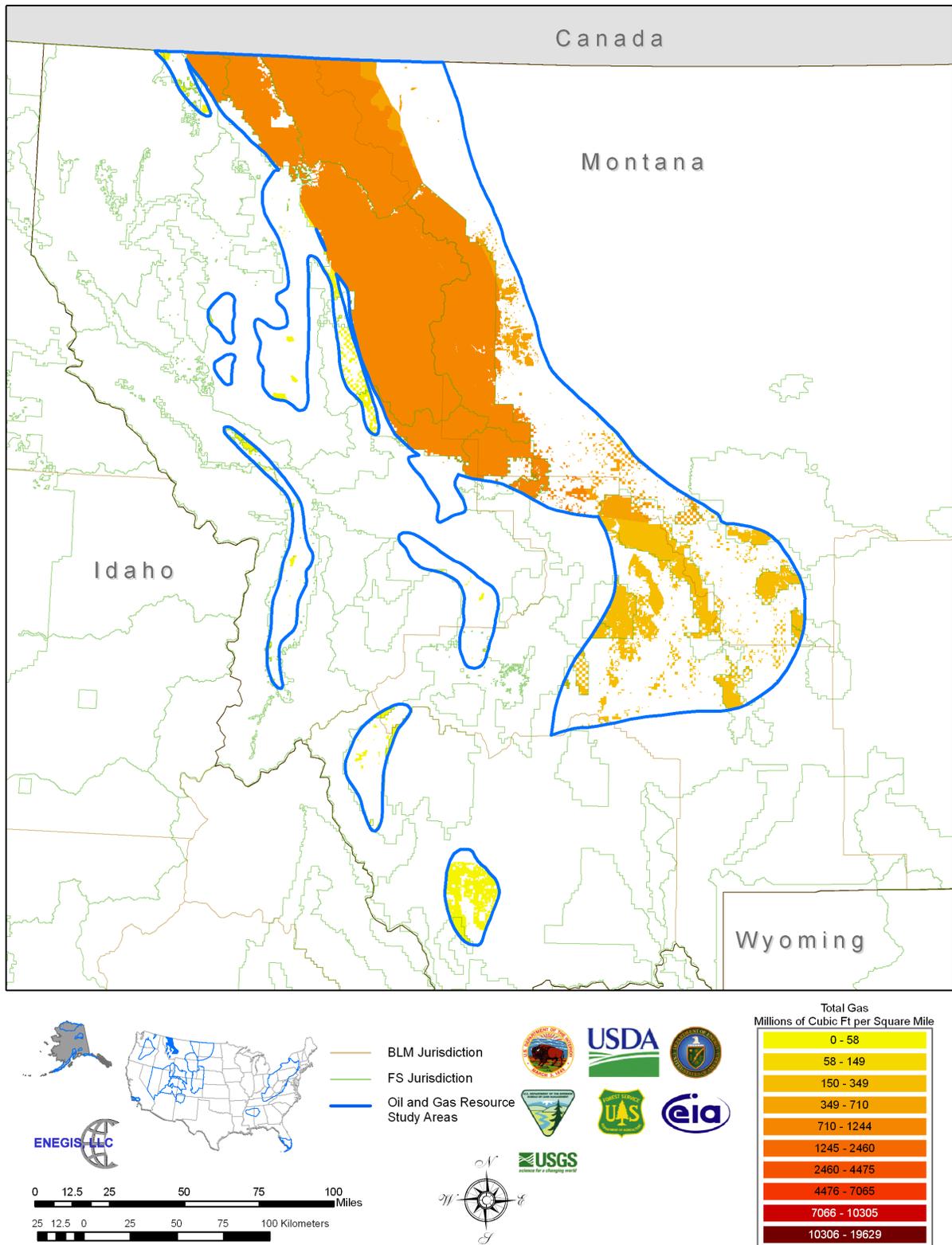


Figure 3-52. Map of Total Federal Natural Gas, Montana Thrust Belt Study Area

Table 3-12. Williston Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
	1.	No Leasing (Statutory/ Executive Order) (NLS)	94	1.8%	3	0.9%	6	0.9%
	2.	No Leasing (Administrative) (NLA)	105	2.0%	4	1.1%	7	1.2%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	611	11.8%	26	7.2%	48	7.8%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	550	10.6%	90	24.5%	151	24.5%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	-	0.0%	-	0.0%	-	0.0%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	74	1.4%	8	2.3%	15	2.4%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	783	15.1%	41	11.2%	68	10.9%
	8.	Leasing, Controlled Surface Use (CSU) ^d	1,288	24.8%	91	24.8%	158	25.5%
	9.	Leasing, Standard Lease Terms (SLTs)	1,679	32.4%	102	27.9%	165	26.8%
Total, Federal Lands including Split Estate			5,183	100.0%	367	100.0%	618	100.0%
Total Non-Federal			39,516		1,858		3,394	
Total Inventory Area			44,699		2,225		4,012	
Summary								
Inaccessible (Categories 1-4)			1,360	26%	124	34%	213	34%
Accessible with Restrictions (Categories 5-8)			2,144	41%	141	38%	240	39%
Accessible under Standard Lease Terms (Category 9)			1,679	32%	102	28%	165	27%
Total, Federal Lands Including Split Estate			5,183	100%	367	100%	618	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

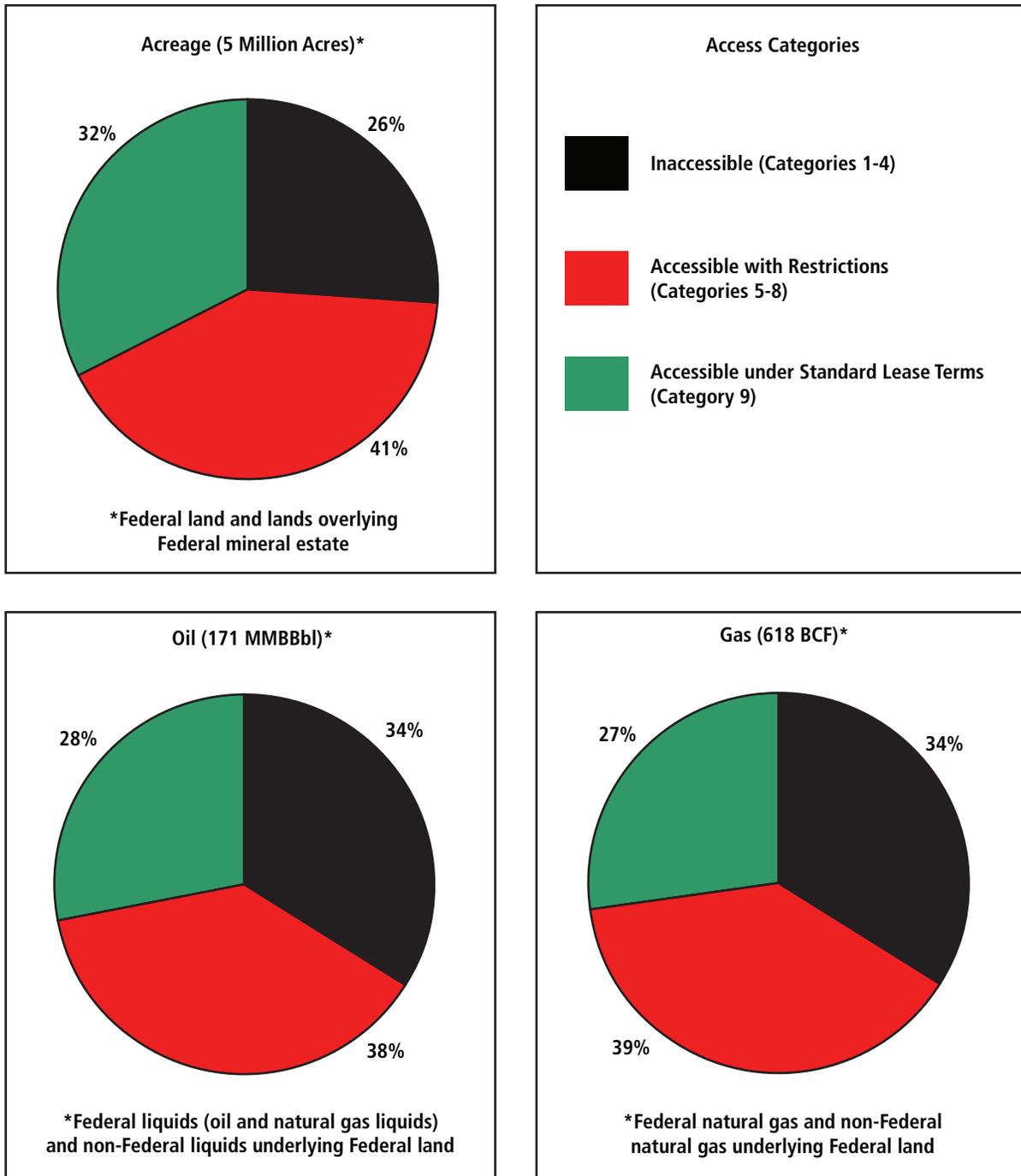


Figure 3-53. Simplified Chart of Results, Williston Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

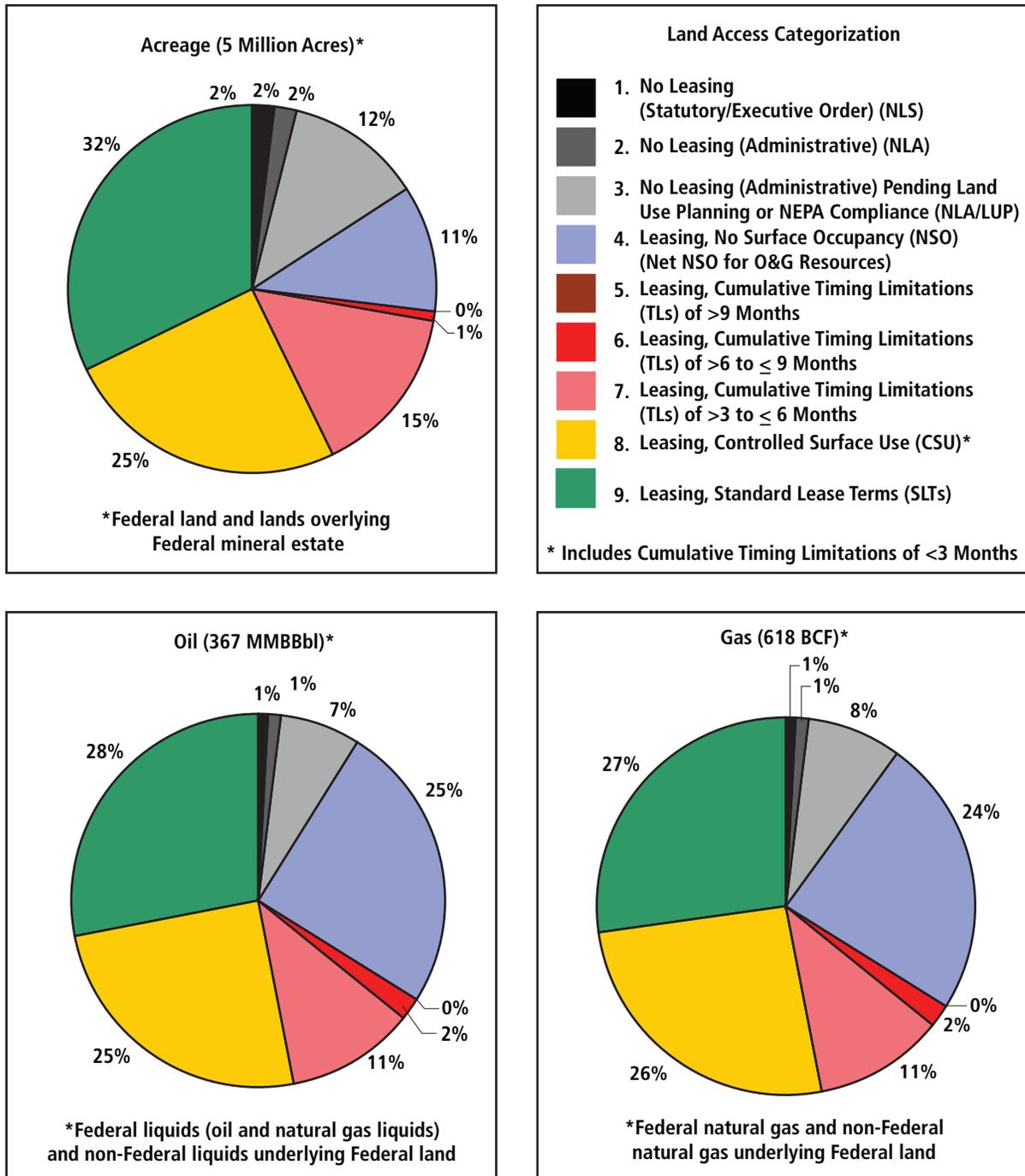


Figure 3-54. Chart of Results, Williston Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

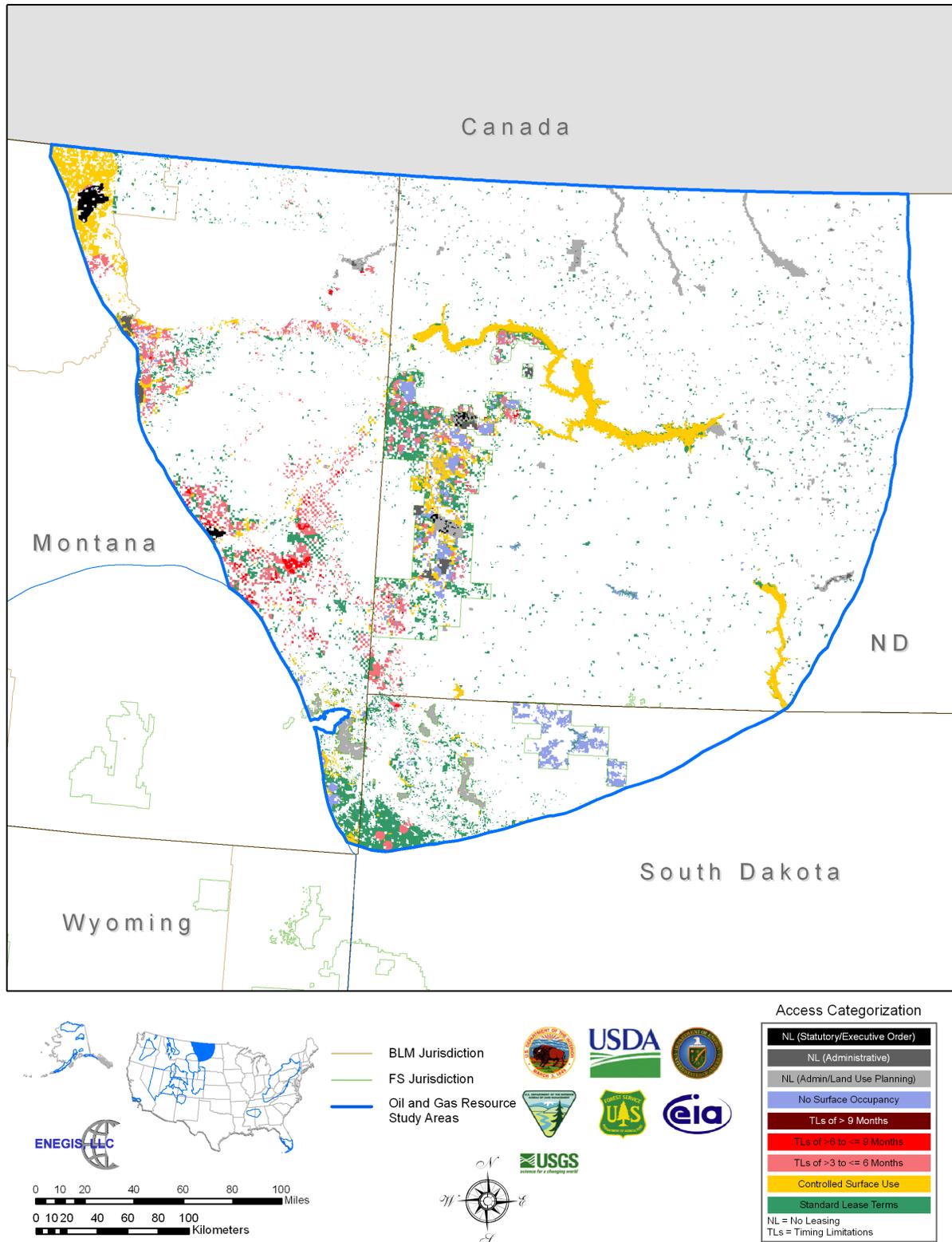


Figure 3-55. Federal Land Access Categorization Map, Williston Basin Study Area

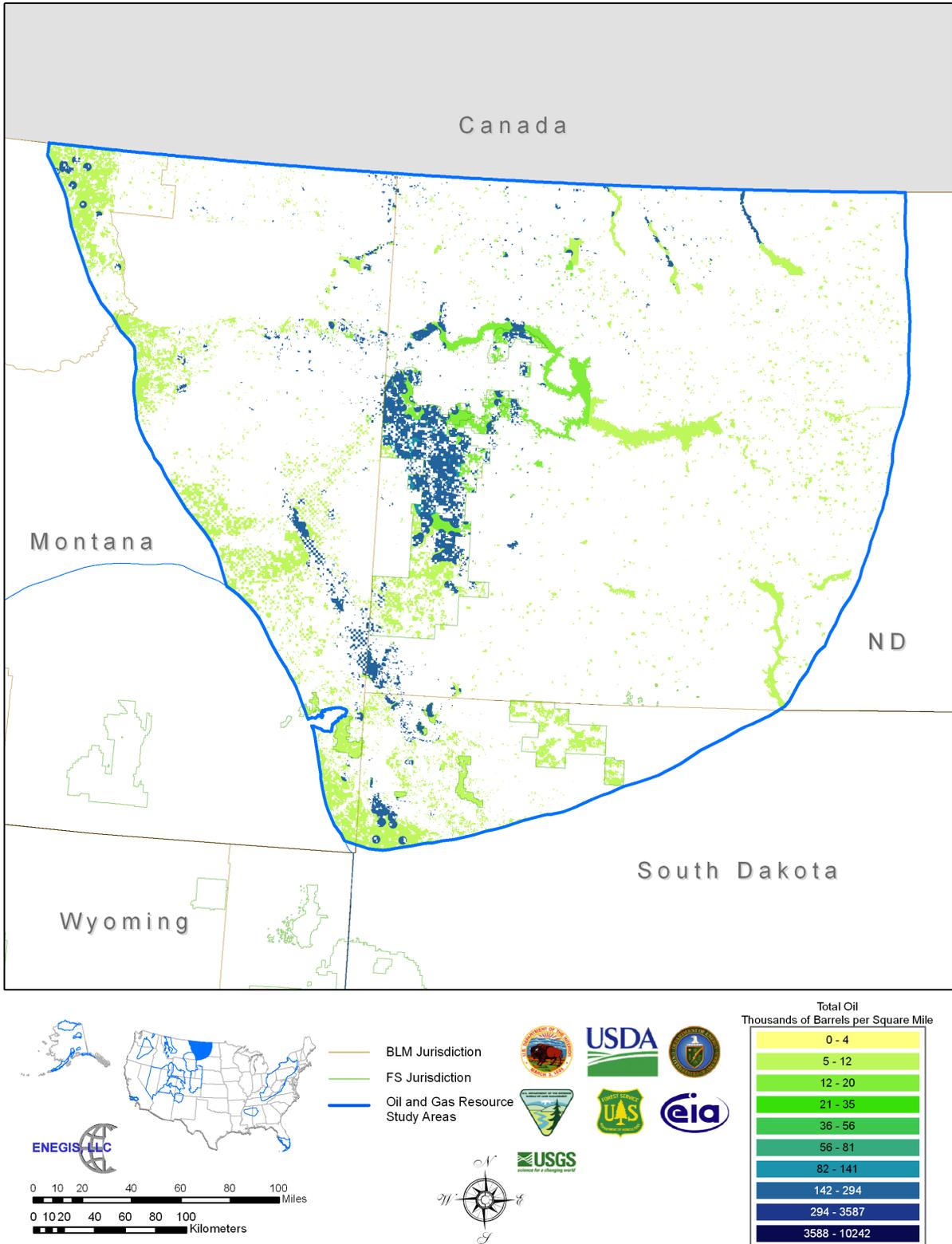


Figure 3-56. Map of Total Federal Oil, Williston Basin Study Area

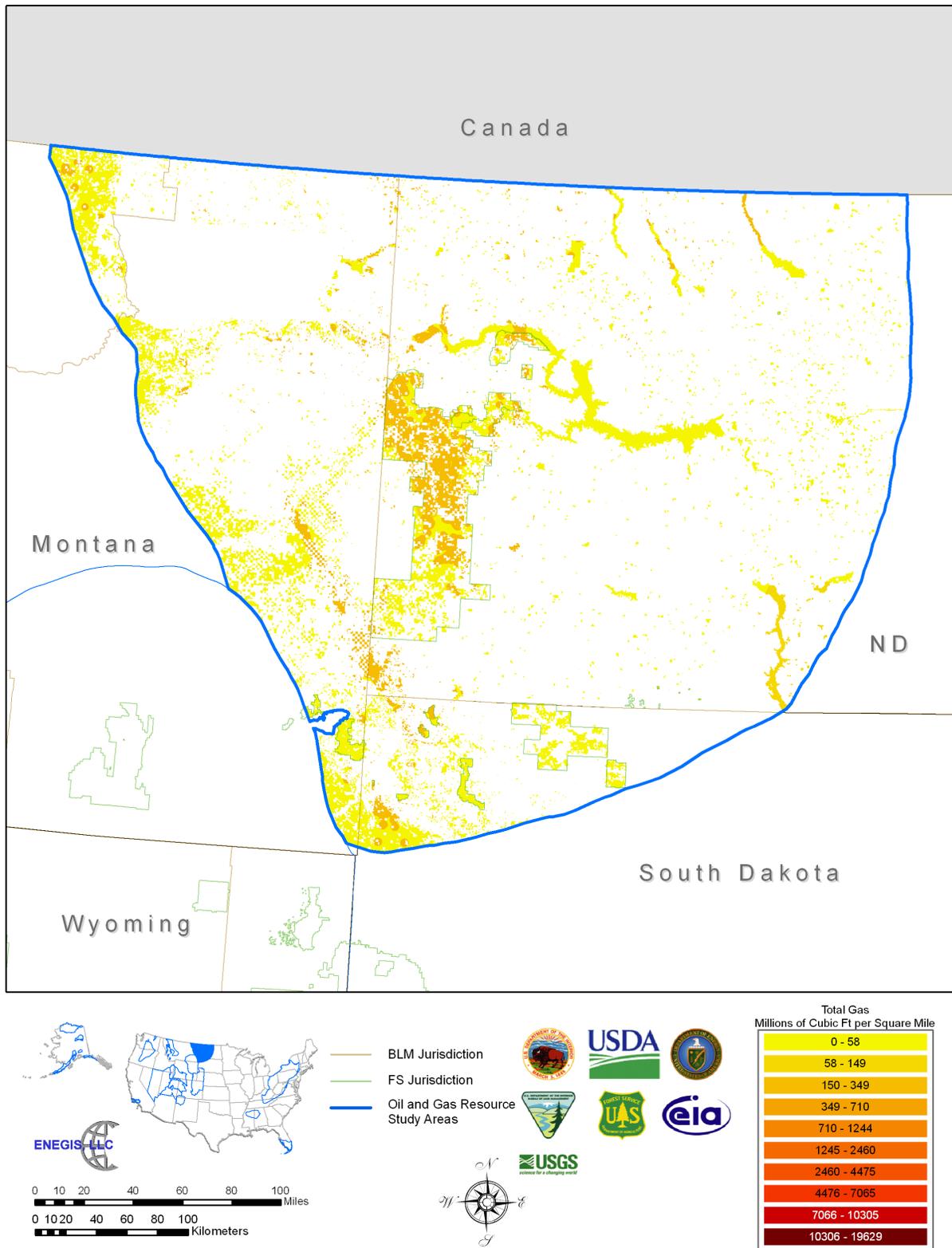


Figure 3-57. Map of Total Federal Natural Gas, Williston Basin Study Area

- Among the study areas, this area has the highest proportion of split estate lands (59 percent of the Federal oil and gas ownership is on split-estate lands).

3.1.13 Wyoming Thrust Belt

- Approximately 57 percent (2.4 million acres) of the Federal land is not accessible (Figures 3-63 and 3-64, Categories 1 through 4). Based on resource estimates, these lands contain 33 percent (14.7 MMbbls) of the Federal oil and 31 percent (87.5 BCF) of the Federal natural gas.
- Approximately 30 percent (1.3 million acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-63 and 3-64, Categories 5 through 8). Based on resource estimates, these lands contain 51 percent (22.7 MMbbls) of the Federal oil and 76 percent (479.7 BCF) of the Federal natural gas.
- Approximately 13 percent (553.9 thousand acres) of the Federal land is accessible under standard lease terms (Figures 3-63 and 3-64, Category 9). Based on resource estimates, these lands contain 16 percent (7.0 MMbbls) of the Federal oil and 10 percent (65.4 BCF) of the Federal natural gas.
- This study area contains only two plays; one is coalbed natural gas and the other is conventional.

3.1.14 Southwestern Wyoming

- Approximately 28 percent (3.2 million acres) of the Federal land in the basin is not accessible (Figures 3-68 and 3-69,

Categories 1 through 4). Based on resource estimates, these lands contain 19 percent (393 MMbbls) of the Federal oil and 18 percent (12,311 BCF) of the Federal natural gas.

- Approximately 53 percent (6.0 million acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-68 and 3-69, Categories 5 through 8). Based on resource estimates, these lands contain 71 percent (1,472 MMbbls) of the Federal oil and 70 percent (47,715 BCF) of the Federal natural gas.
- Approximately 19 percent (2.2 million acres) of the Federal land is accessible under standard lease terms (Figures 3-63 and 3-64, Category 9). Based on resource estimates, these lands contain 10 percent (216.4 MMbbls) of the Federal oil and 12 percent (8,007 BCF) of the Federal natural gas.
- Almost all of the undiscovered natural gas (97 percent) is interpreted to be in continuous (unconventional) accumulations.
- The geography of the Federal land is highly complex due a checkerboard pattern of ownership resulting from railroad land grants.

3.1.15 Denver Basin

- Approximately 39 percent (1.0 million acres) of the Federal land is not accessible (Figures 3-73 and 3-74, Categories 1 through 4). Based on resource estimates, these lands contain 19 percent (3.3 MMbbls) of the Federal oil and 36 percent (31.9 BCF) of the Federal natural gas.

Table 3-13. Powder River Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
More Constrained ↑ Less Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	161	1.3%	4	0.3%	59	0.6%
	2.	No Leasing (Administrative) (NLA)	132	1.1%	0	0.0%	18	0.2%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	460	3.8%	14	1.1%	588	6.4%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	2,360	19.6%	33	2.6%	209	2.3%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	0	0.0%	8	0.6%	51	0.6%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	521	4.3%	283	21.9%	2,344	25.7%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	2,942	24.4%	421	32.7%	2,933	32.1%
	8.	Leasing, Controlled Surface Use (CSU) ^d	2,247	18.7%	310	24.0%	1,707	18.7%
	9.	Leasing, Standard Lease Terms (SLTs)	3,224	26.8%	216	16.8%	1,228	13.4%
Total, Federal Lands including Split Estate			12,047	100.0%	1,290	100.0%	9,137	100.0%
Total Non-Federal			15,943		1,091		10,157	
Total Inventory Area			27,991		2,380		19,294	
Summary								
Inaccessible (Categories 1-4)			3,113	26%	51	4%	874	10%
Accessible with Restrictions (Categories 5-8)			5,710	47%	1,022	79%	7,035	77%
Accessible under Standard Lease Terms (Category 9)			3,224	27%	216	17%	1,228	13%
Total, Federal Lands Including Split Estate			12,047	100%	1,290	100%	9,137	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

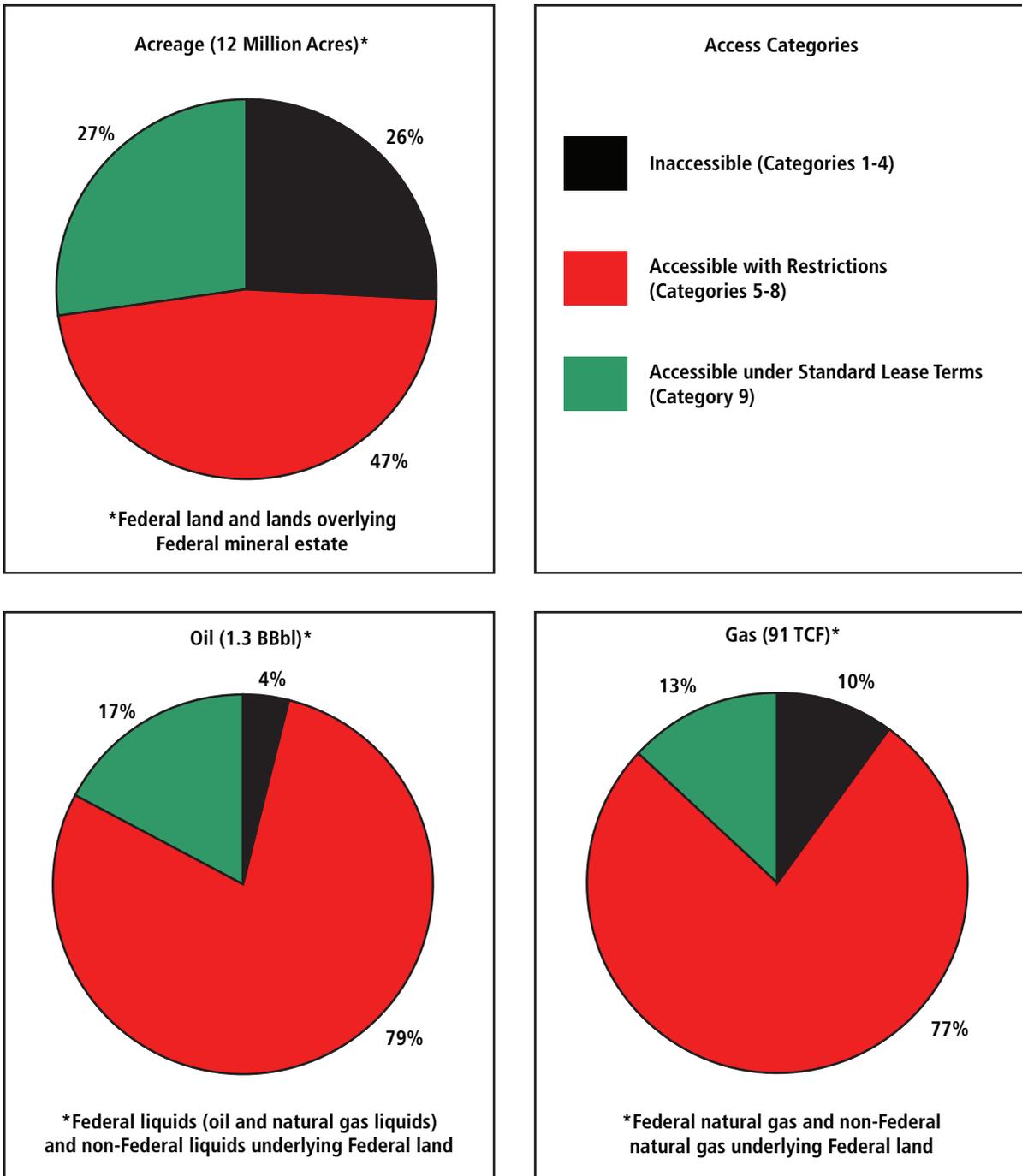


Figure 3-58. Simplified Chart of Results, Powder River Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

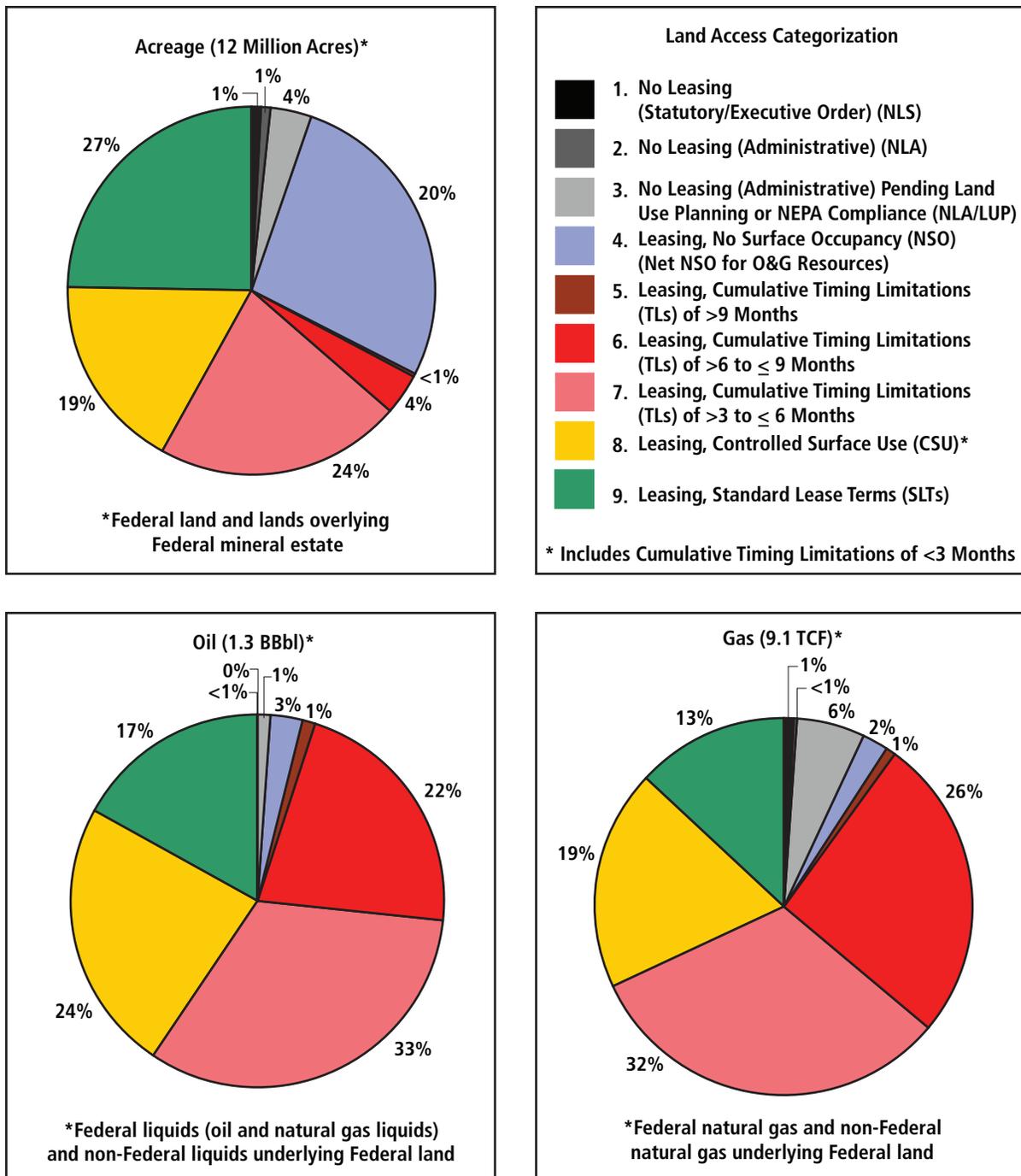


Figure 3-59. Chart of Results, Powder River Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

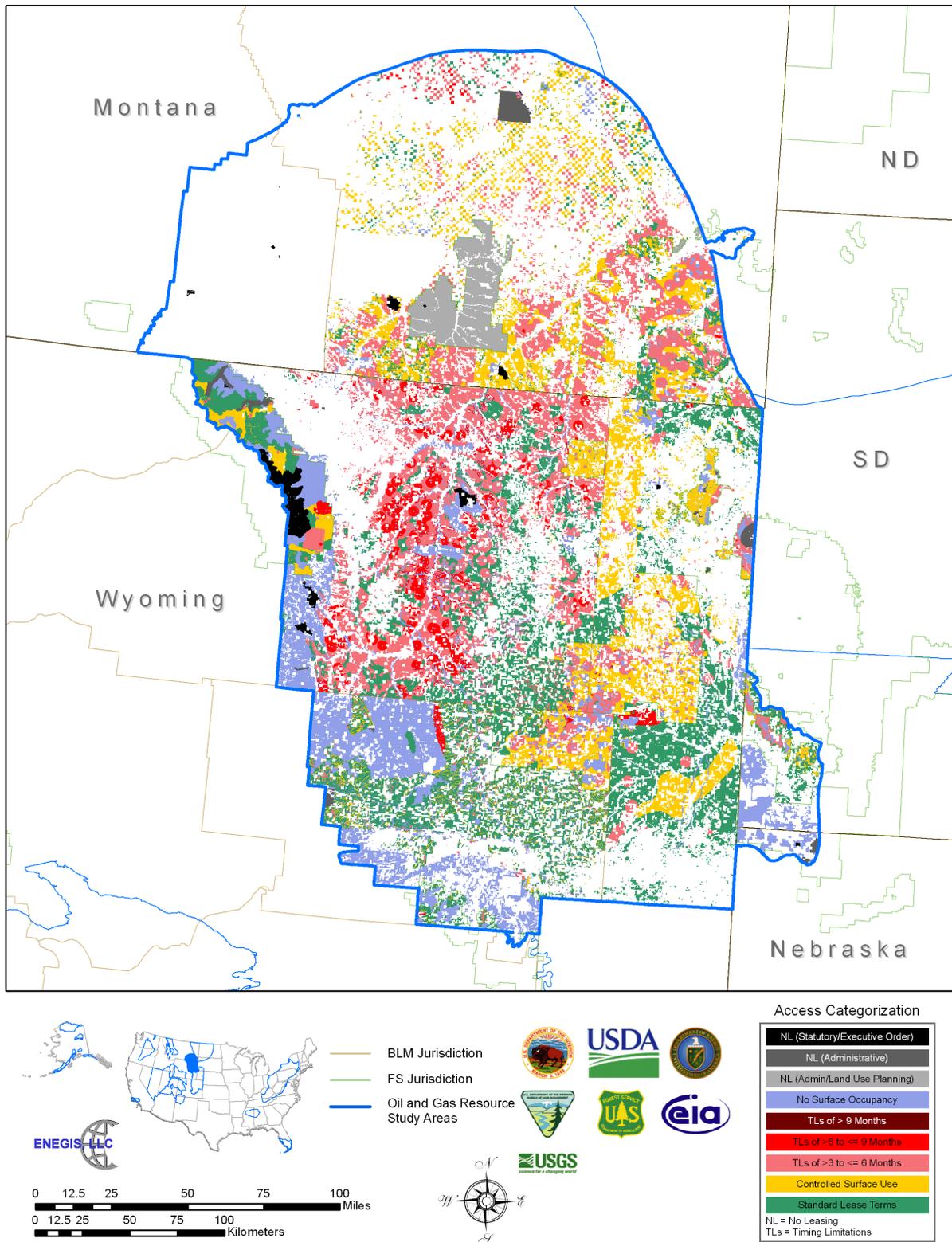


Figure 3-60. Federal Land Access Categorization Map, Powder River Basin Study Area

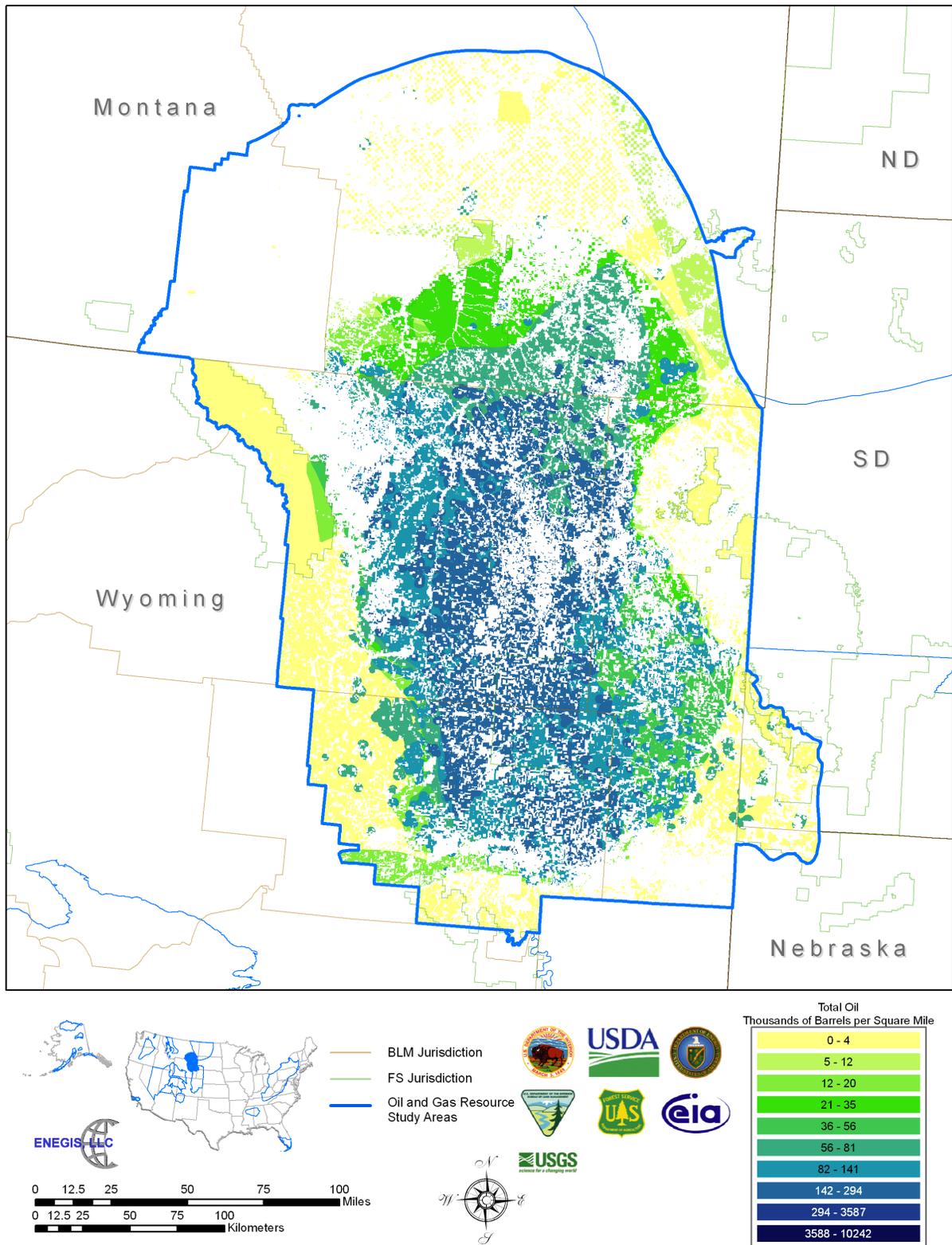


Figure 3-61. Map of Total Federal Oil, Powder River Basin Study Area

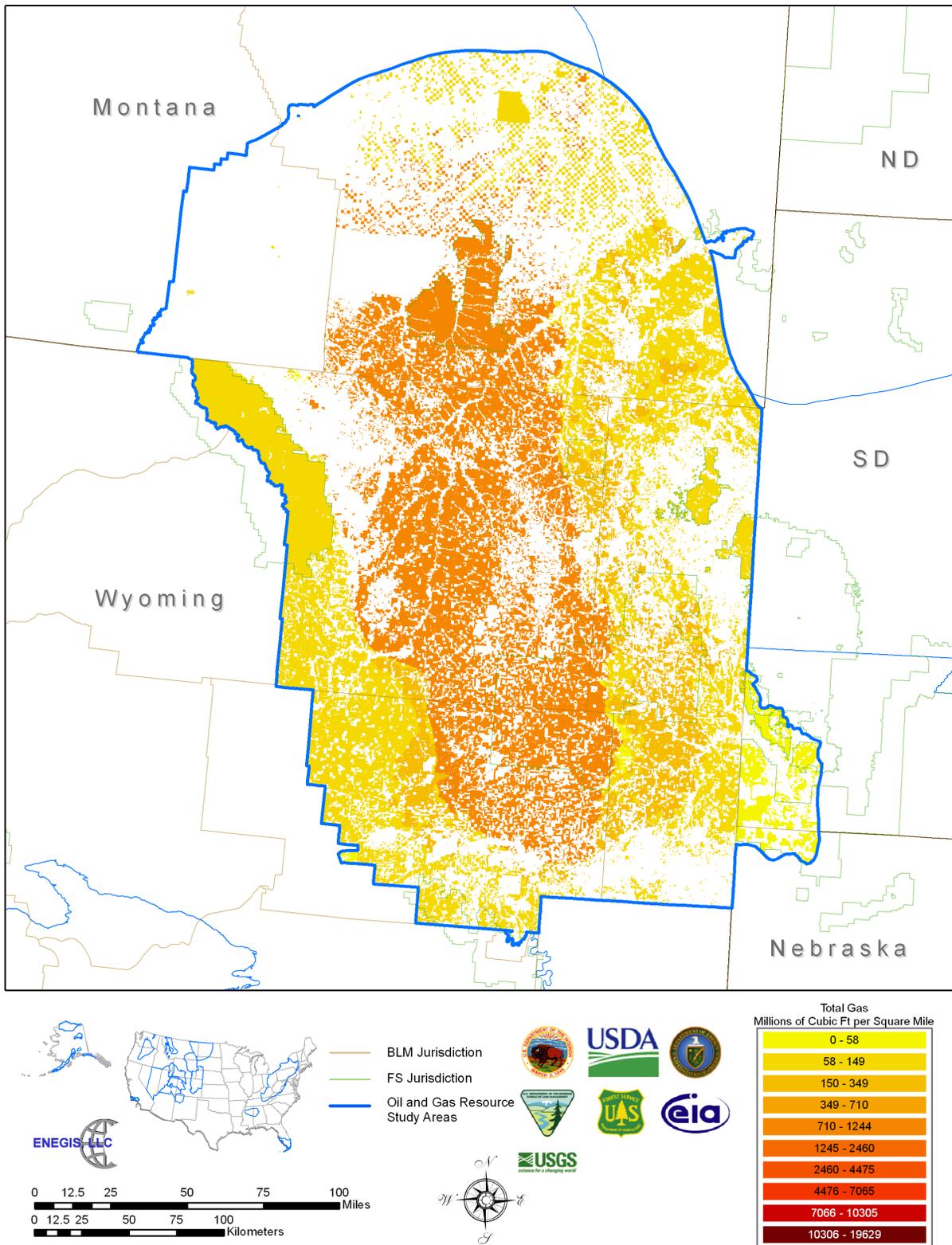


Figure 3-62. Map of Total Federal Natural Gas, Powder River Basin Study Area

Table 3-14. Wyoming Thrust Belt Study Area—Federal Land and Oil and Natural Gas Resources Affected by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
More Constrained ↑ ↓ Less Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	269	6.4%	3	6.1%	16	2.6%
	2.	No Leasing (Administrative) (NLA)	305	7.3%	3	6.9%	18	2.8%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	520	12.5%	5	11.9%	31	4.9%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	1,266	30.4%	4	8.3%	22	3.5%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	41	1.0%	1	2.2%	10	1.6%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	181	4.3%	6	12.7%	155	24.5%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	494	11.8%	8	18.2%	177	27.9%
	8.	Leasing, Controlled Surface Use (CSU) ^d	540	13.0%	8	18.0%	138	21.8%
	9.	Leasing, Standard Lease Terms (SLTs)	554	13.3%	7	15.7%	65	10.3%
Total, Federal Lands including Split Estate			4,171	100.0%	44	100.0%	633	100.0%
Total Non-Federal			3,889		44		1,057	
Total Inventory Area			8,060		89		1,690	
Summary								
Inaccessible (Categories 1-4)			2,360	57%	15	33%	87	14%
Accessible with Restrictions (Categories 5-8)			1,257	30%	23	51%	480	76%
Accessible under Standard Lease Terms (Category 9)			554	13%	7	16%	65	10%
Total, Federal Lands Including Split Estate			4,171	100%	44	100%	633	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

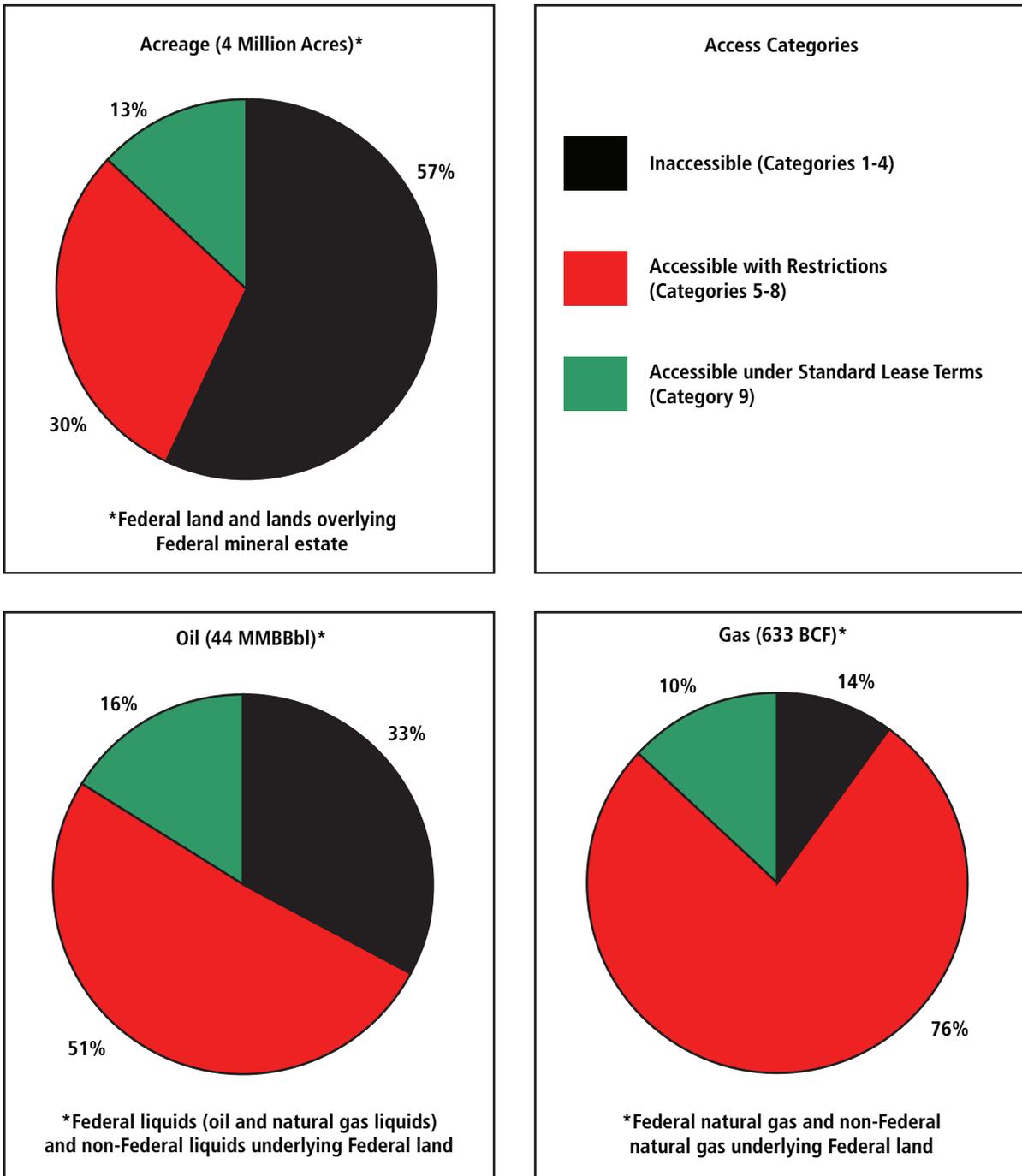


Figure 3-63. Simplified Chart of Results, Wyoming Thrust Belt Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

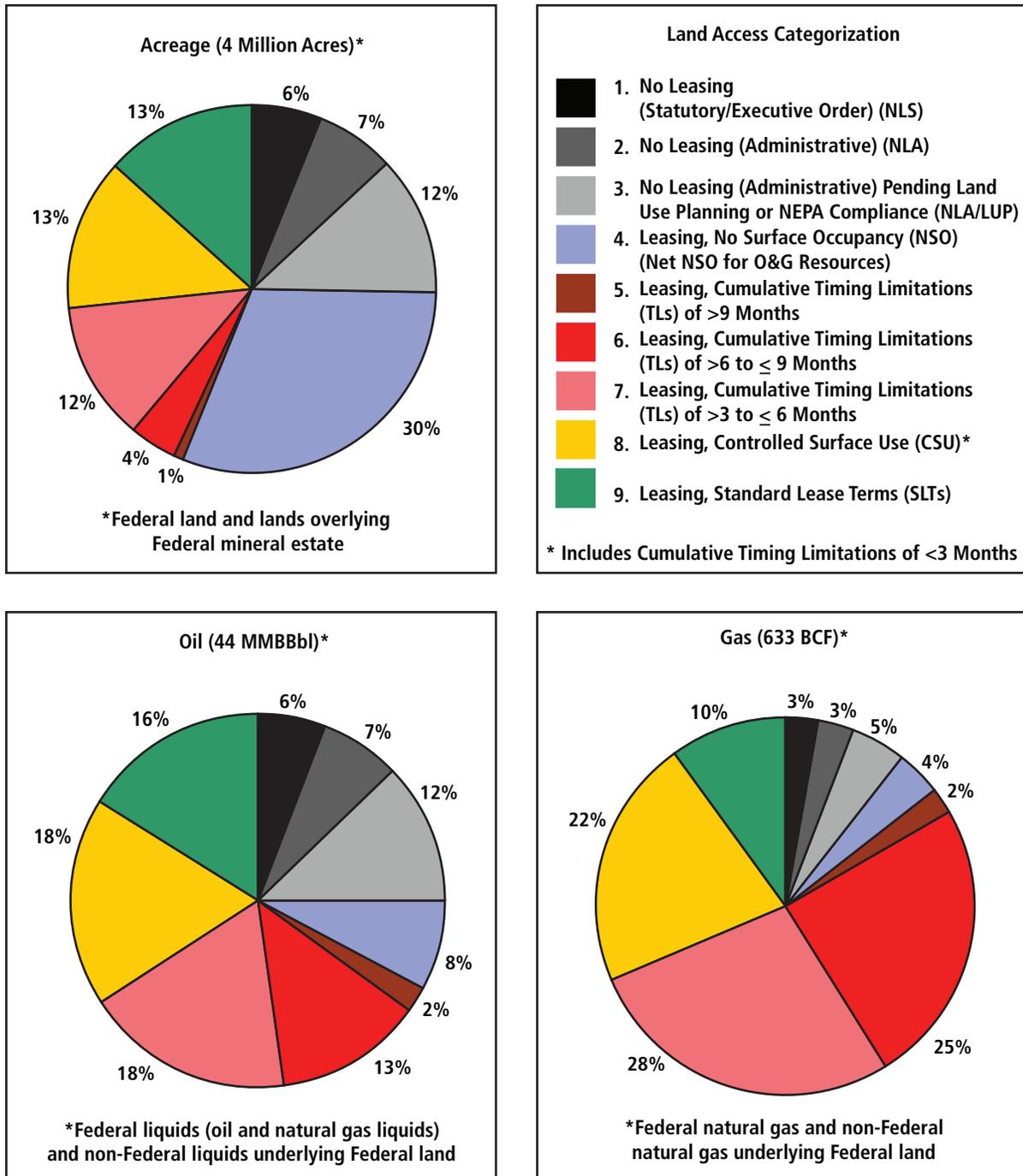


Figure 3-64. Chart of Results, Wyoming Thrust Belt Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

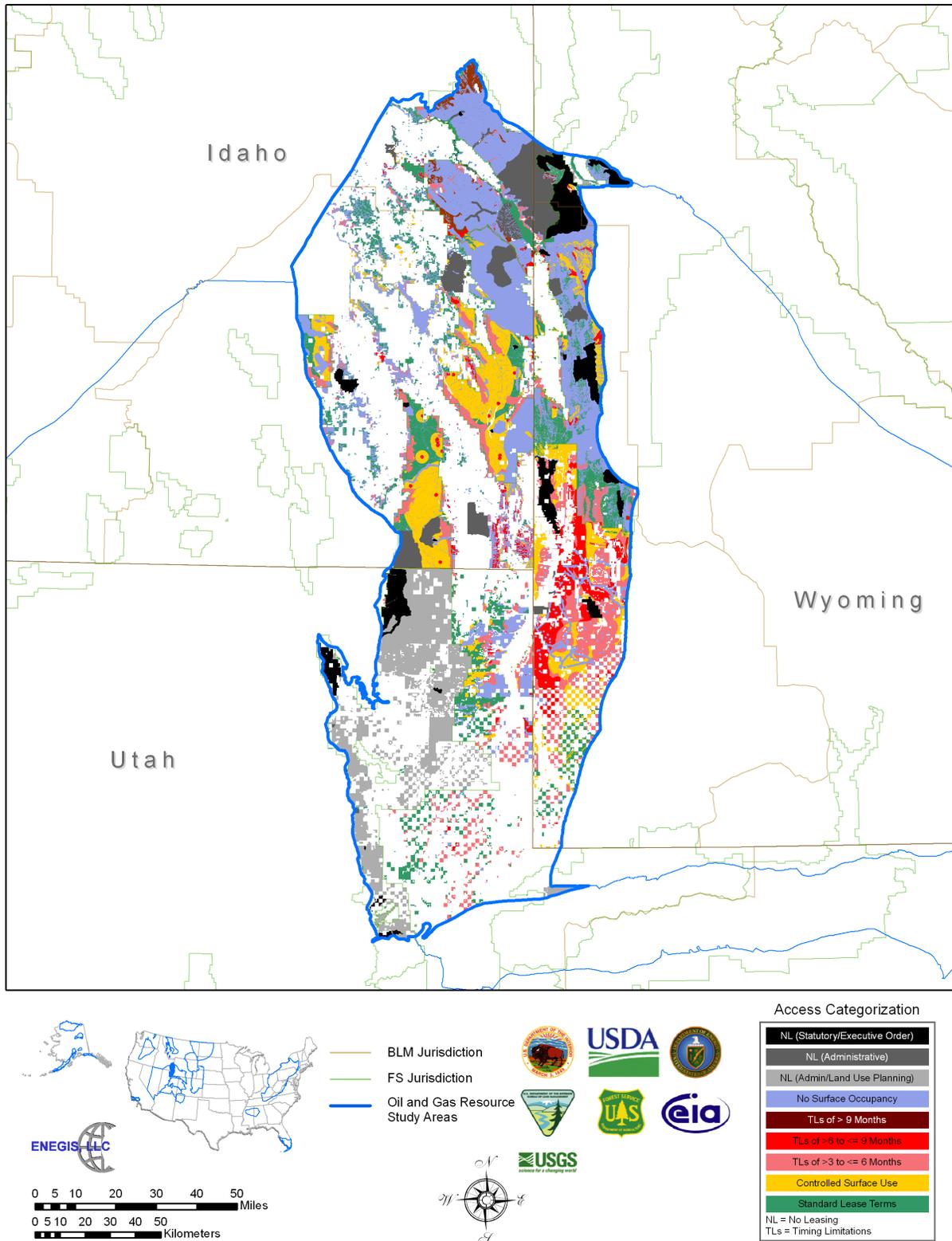


Figure 3-65. Federal Land Access Categorization Map, Wyoming Thrust Belt Study Area

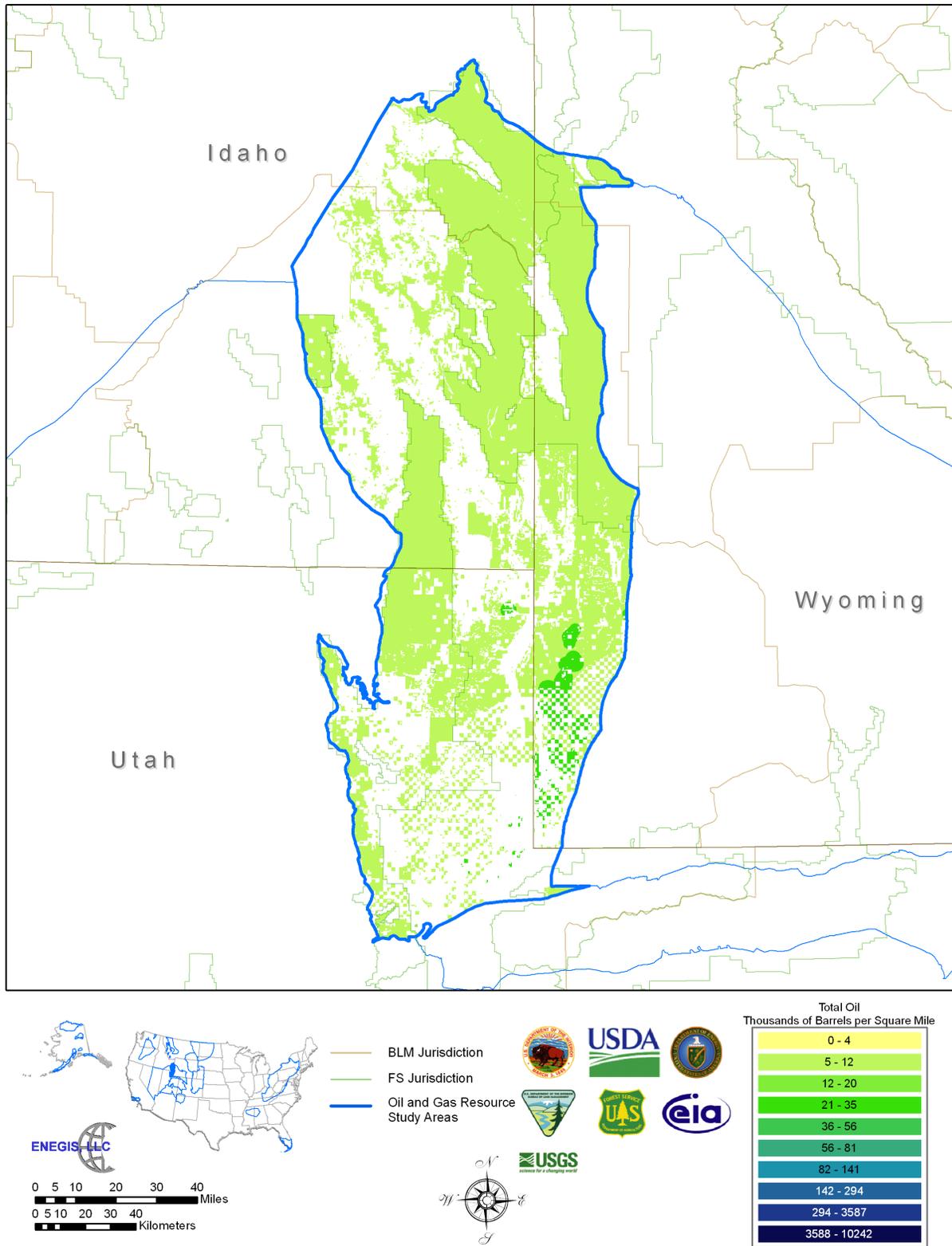


Figure 3-66. Map of Total Federal Oil, Wyoming Thrust Belt Study Area

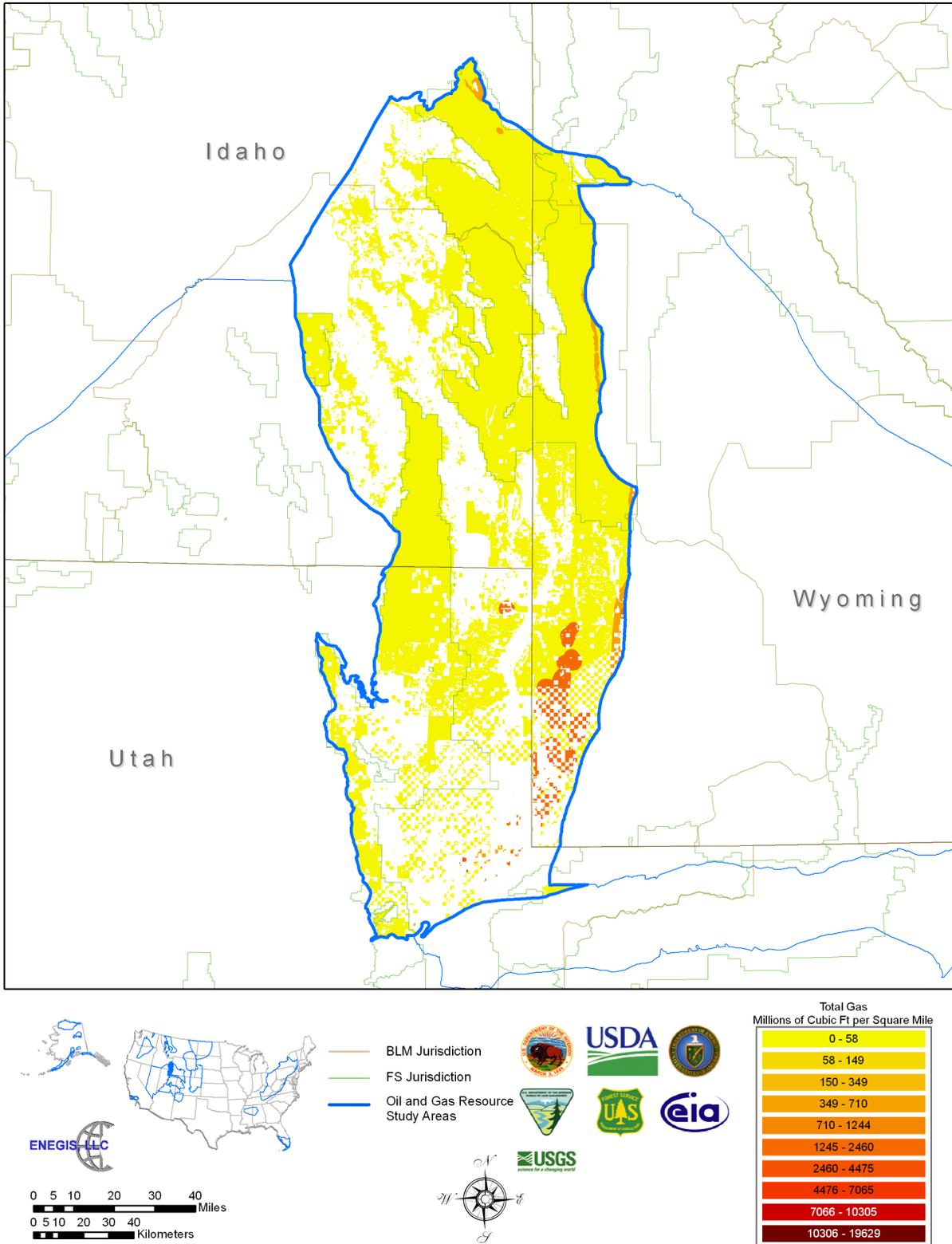


Figure 3-67. Map of Total Federal Natural Gas, Wyoming Thrust Belt Study Area

Table 3-15. Southwestern Wyoming Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
↑ More Constrained ↓ Less Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	580	5.1%	110	5.3%	3,637	5.3%
	2.	No Leasing (Administrative) (NLA)	493	4.3%	95	4.6%	2,744	4.0%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	182	1.6%	35	1.7%	1,046	1.5%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	1,938	17.0%	153	7.4%	4,883	7.2%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	12	0.1%	6	0.3%	230	0.3%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	797	7.0%	330	15.8%	9,862	14.5%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	2,497	22.0%	635	30.5%	21,481	31.6%
	8.	Leasing, Controlled Surface Use (CSU) ^d	2,686	23.6%	502	24.1%	16,142	23.7%
	9.	Leasing, Standard Lease Terms (SLTs)	2,187	19.2%	216	10.4%	8,007	11.8%
Total, Federal Lands including Split Estate			11,371	100.0%	2,082	100.0%	68,033	100.0%
Total Non-Federal			5,212		844		27,101	
Total Inventory Area			16,583		2,925		95,134	
Summary								
Inaccessible (Categories 1-4)			3,192	28%	393	19%	12,311	18%
Accessible with Restrictions (Categories 5-8)			5,992	53%	1,472	71%	47,715	70%
Accessible under Standard Lease Terms (Category 9)			2,187	19%	216	10%	8,007	12%
Total, Federal Lands Including Split Estate			11,371	100%	216	10%	8,007	12%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

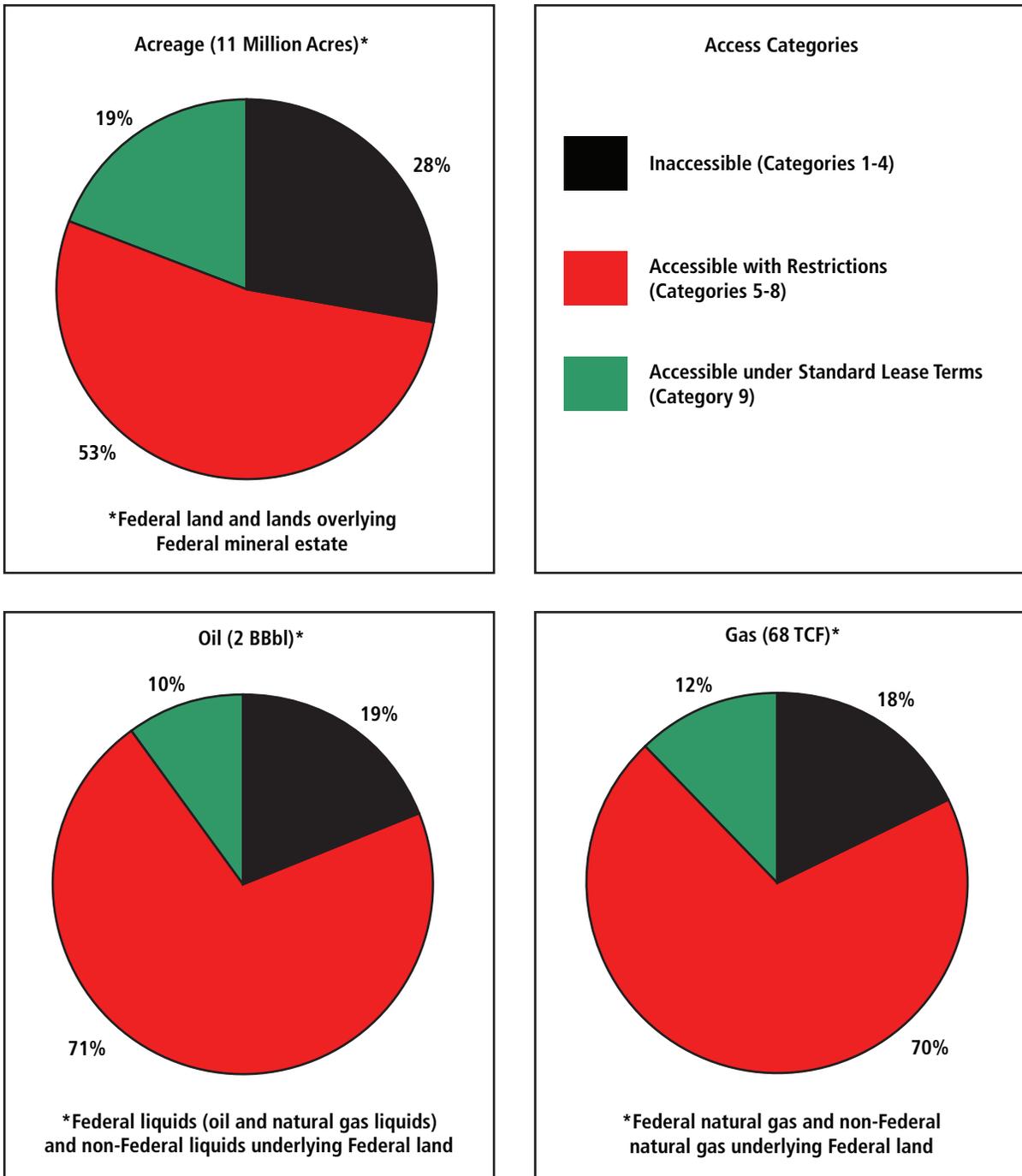


Figure 3-68. Simplified Chart of Results, Southwestern Wyoming Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

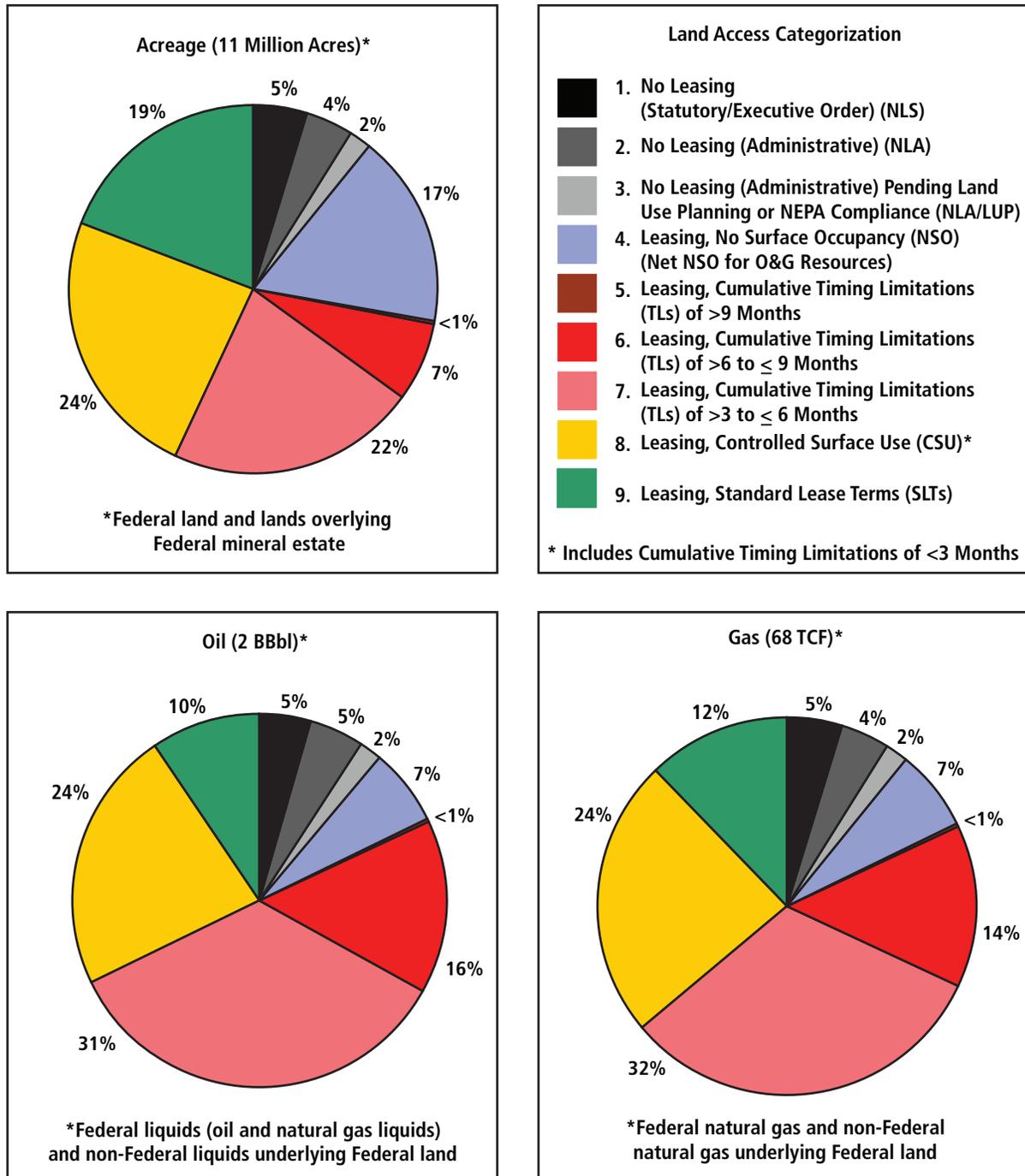


Figure 3-69. Chart of Results, Southwestern Wyoming Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

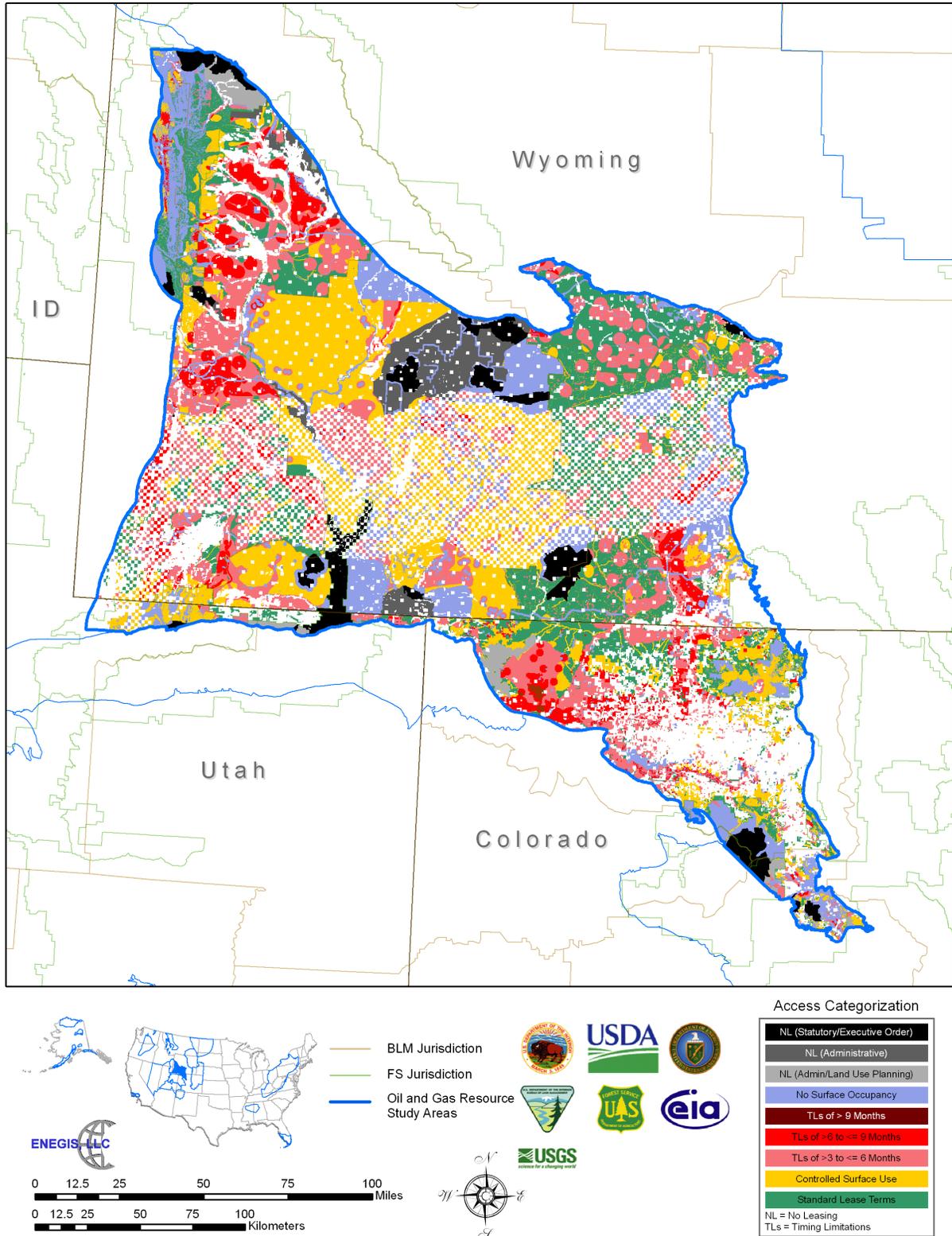


Figure 3-70. Federal Land Access Categorization Map, Southwestern Wyoming Study Area

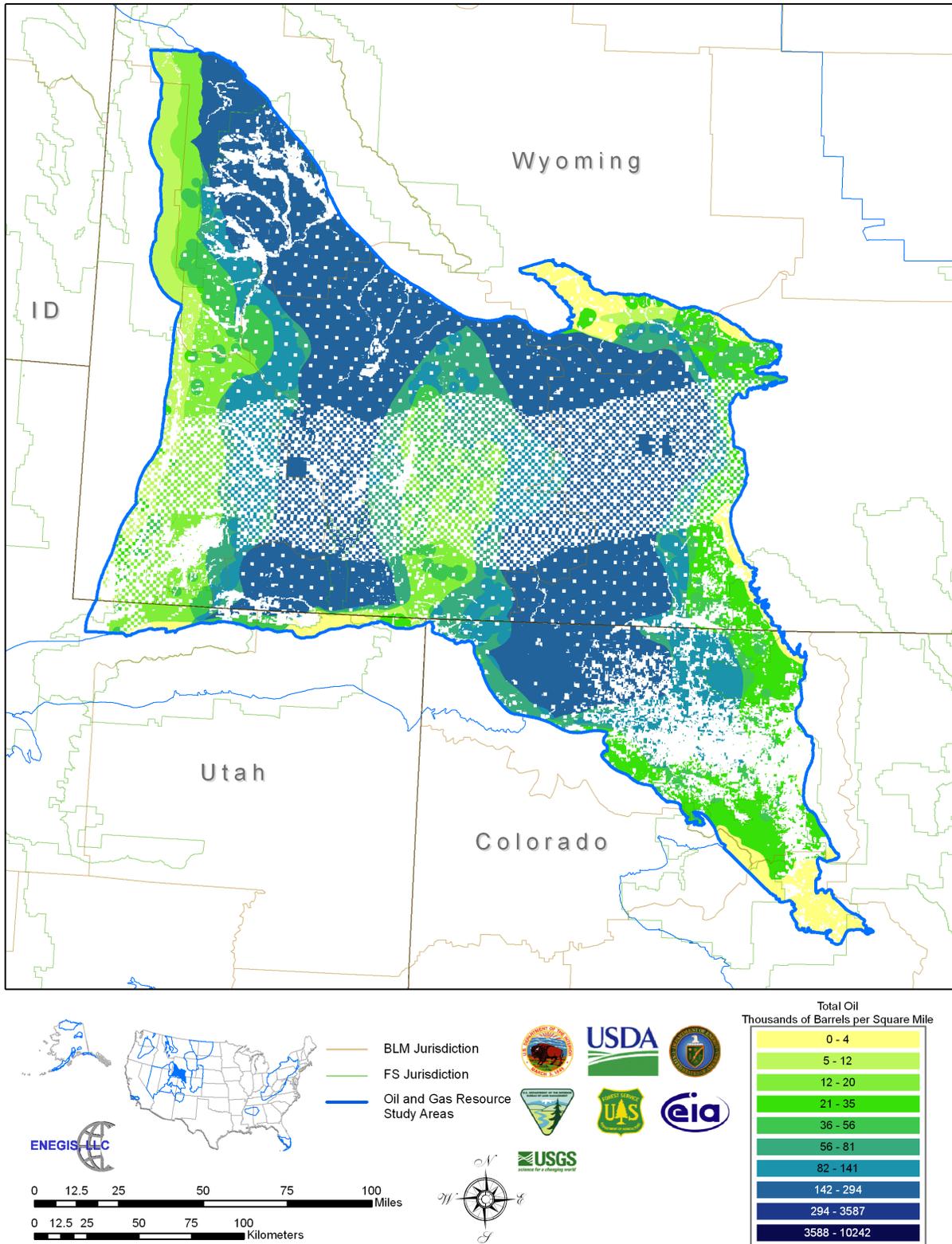


Figure 3-71. Map of Total Federal Oil, Southwestern Wyoming Study Area

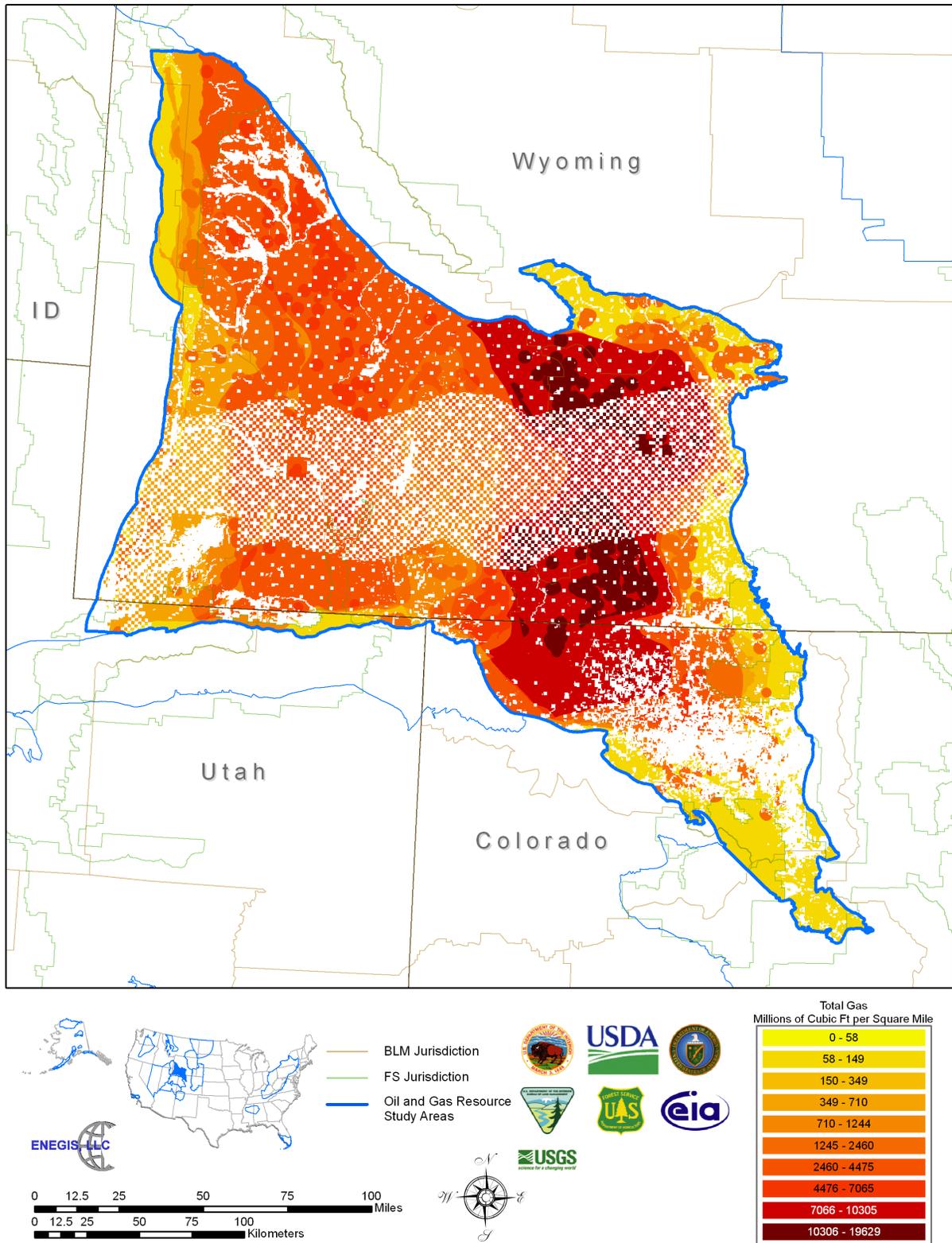


Figure 3-72. Map of Total Federal Natural Gas, Southwestern Wyoming Study Area

- Approximately 28 percent (741.9 thousand acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-73 and 3-74, Categories 5 through 8). Based on resource estimates, these lands contain 69 percent (11.8 MMbbls) of the Federal oil and 52 percent (45.5 BCF) of the Federal natural gas.
- Approximately 33 percent (870.2 thousand acres) of the Federal land is accessible under standard lease terms (Figures 3-73 and 3-74, Category 9). Based on resource estimates, these lands contain 12 percent (2.0 MMbbls) of the Federal oil and 12 percent (10.3 BCF) of the Federal natural gas.
- Outside of FS lands, this study area contains limited Federal lands, which are widely dispersed.

3.1.16 Florida Peninsula

- Approximately 94 percent (1.9 million acres) of the Federal land is not accessible (Figures 3-78 and 3-79, Categories 1 through 4). Based on resource estimates, these lands contain 81 percent (59.8 MMbbls) of the Federal oil and 81 percent (260.7 BCF) of the Federal natural gas.
- Approximately 6 percent (114.4 thousand acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-78 and 3-79, Categories 5 through 8). Based on resource estimates, these lands contain 19 percent (14.0 MMbbls) of the Federal oil and 19 percent (62.3 BCF) of the Federal natural gas.
- Less than 1 percent (1.1 thousand acres) of the Federal land in the study area is accessible under standard lease terms

(Figures 3-78 and 3-79, Category 9). These lands contain virtually no Federal oil or natural gas.

- The Department of the Interior has agreed in principle to acquire the mineral rights under Big Cypress National Preserve, Florida Panther National Wildlife Refuge, and Ten Thousand Islands National Wildlife Refuge from Collier Resources Company, virtually ensuring no new oil and gas development in the three areas.⁴⁶

3.1.17 Black Warrior Basin

- Approximately 83 percent (574.4 thousand acres) of the Federal land is not accessible (Figures 3-83 and 3-84, Categories 1 through 4). Based on resource estimates, these lands contain 65 percent of the Federal oil (0.6 MMbbls) and 58 percent (227.2 BCF) of the Federal natural gas.
- Approximately 14 percent (97.5 thousand acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-83 and 3-84, Categories 5 through 8). Based on resource estimates, these lands contain 29 percent of the Federal oil (0.3 MMbbls) and 32 percent (126.2 BCF) of the Federal natural gas.
- Approximately 3 percent (21.8 thousand acres) of the Federal land is accessible under standard lease terms (Figures 3-83 and 3-84, Category 9). Based on resource estimates, these lands contain 5 percent of the Federal oil (0.05 MMbbls) and 10 percent (37.5 BCF) of the Federal natural gas.

⁴⁶ Interior Reaches Agreement to Acquire Mineral Rights in Everglades, Settles Litigation on Offshore Oil and Gas Leases in Destin Dome. See the website: <http://www.fws.gov/southeast/news/2002/n02-002.html>

Table 3-16. Denver Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
	1.	No Leasing (Statutory/ Executive Order) (NLS)	68	2.6%	0	0.7%	0	0.3%
	2.	No Leasing (Administrative) (NLA)	305	11.5%	1	8.3%	14	16.3%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	81	3.1%	1	3.3%	1	1.4%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	586	22.1%	1	7.2%	16	18.4%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	2	0.1%	0	0.6%	1	0.8%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	28	1.1%	1	8.5%	5	5.7%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	222	8.4%	3	16.5%	8	9.3%
	8.	Leasing, Controlled Surface Use (CSU) ^d	489	18.4%	7	43.2%	32	36.1%
	9.	Leasing, Standard Lease Terms (SLTs)	870	32.8%	2	11.8%	10	11.7%
Total, Federal Lands including Split Estate			2,652	100.0%	17	100.0%	88	100.0%
Total Non-Federal			32,842		307		2,635	
Total Inventory Area			35,494		324		2,723	
Summary								
Inaccessible (Categories 1-4)			1,040	39%	3	19%	32	36%
Accessible with Restrictions (Categories 5-8)			742	28%	12	69%	46	52%
Accessible under Standard Lease Terms (Category 9)			870	33%	2	12%	10	12%
Total, Federal Lands Including Split Estate			2,652	100%	17	100%	88	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs^c Including associated dissolved and nonassociated natural gas^d Includes Cumulative Timing Limitations of ≤3 months

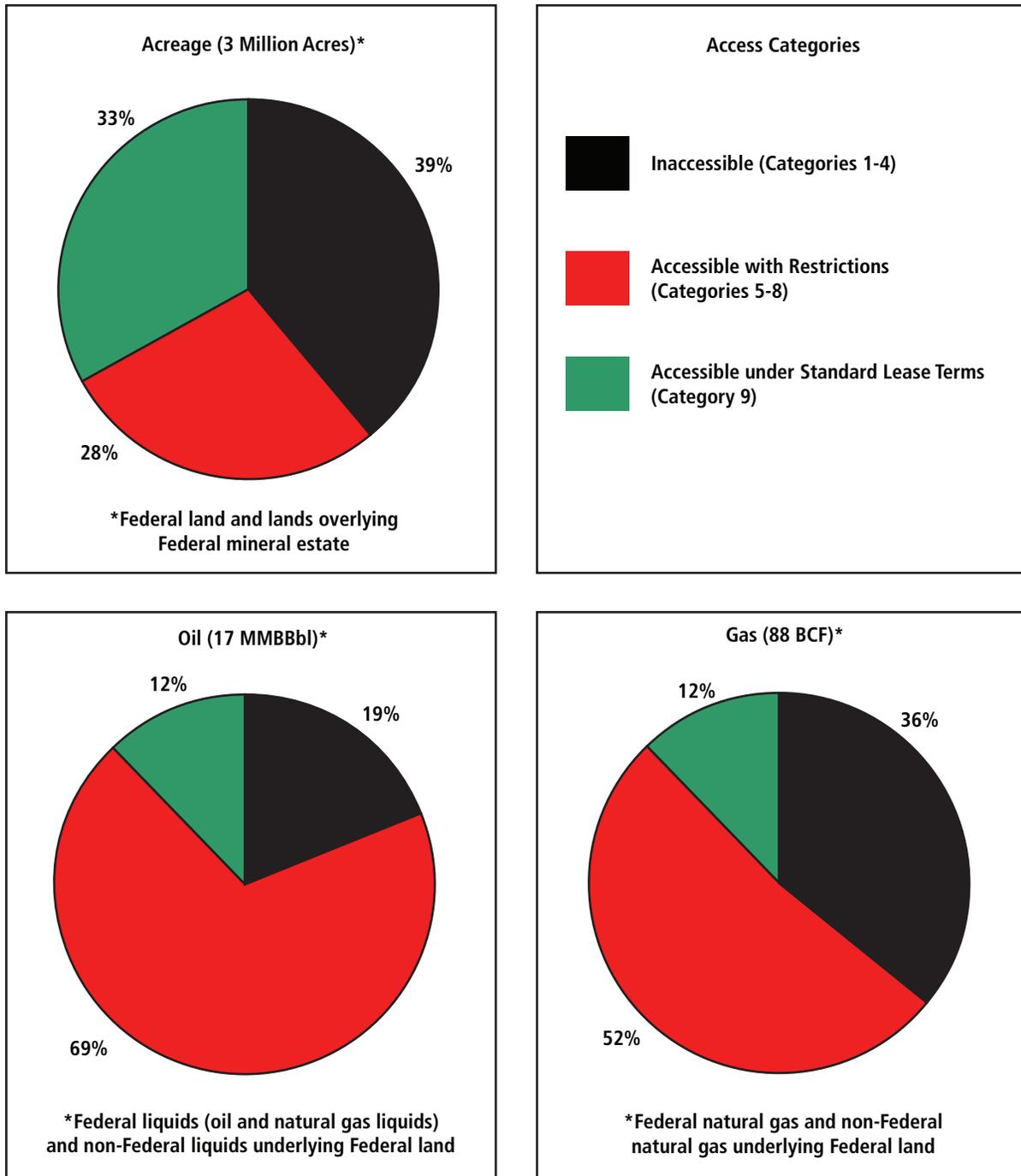


Figure 3-73. Simplified Chart of Results, Denver Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

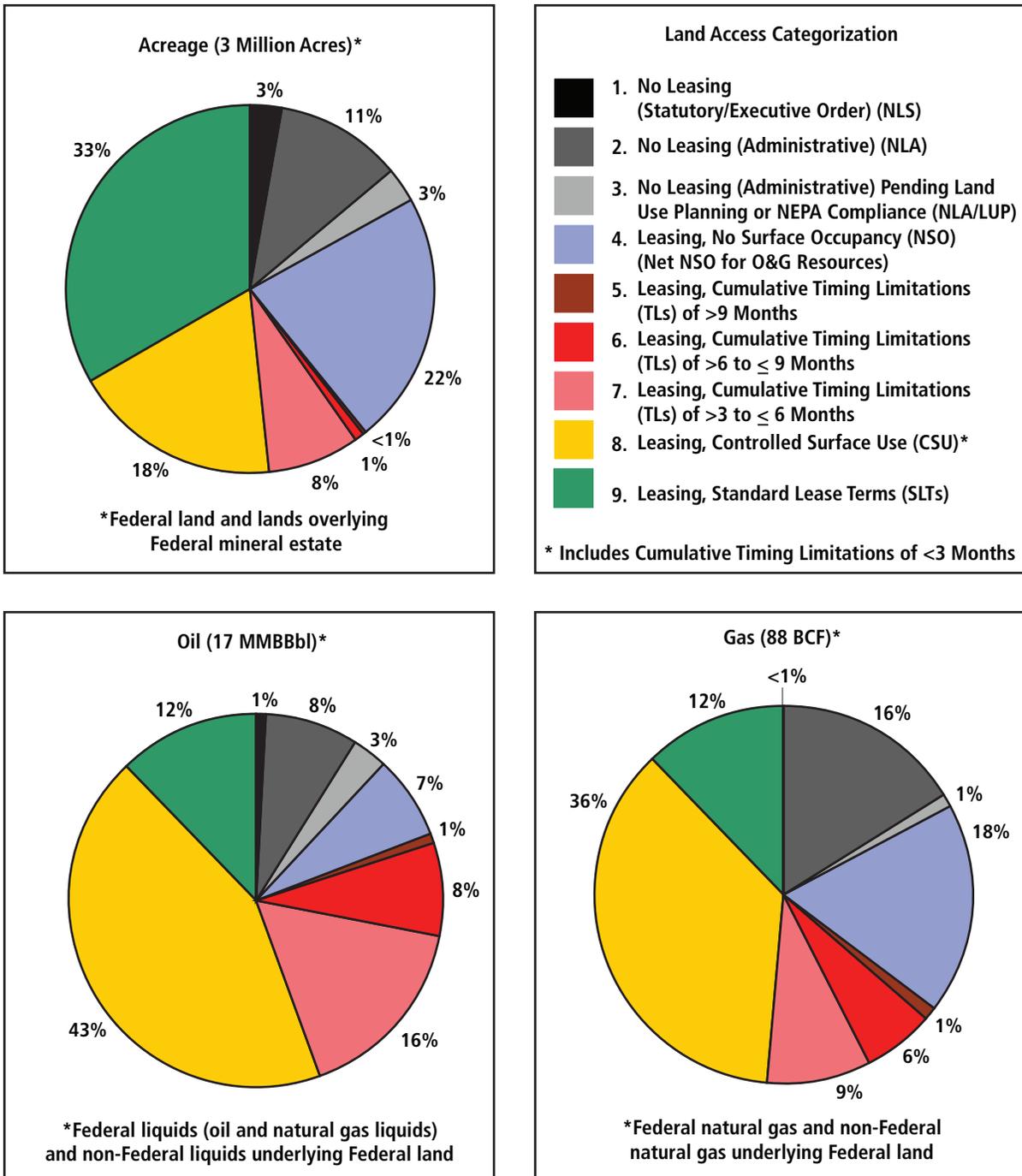


Figure 3-74. Chart of Results, Denver Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

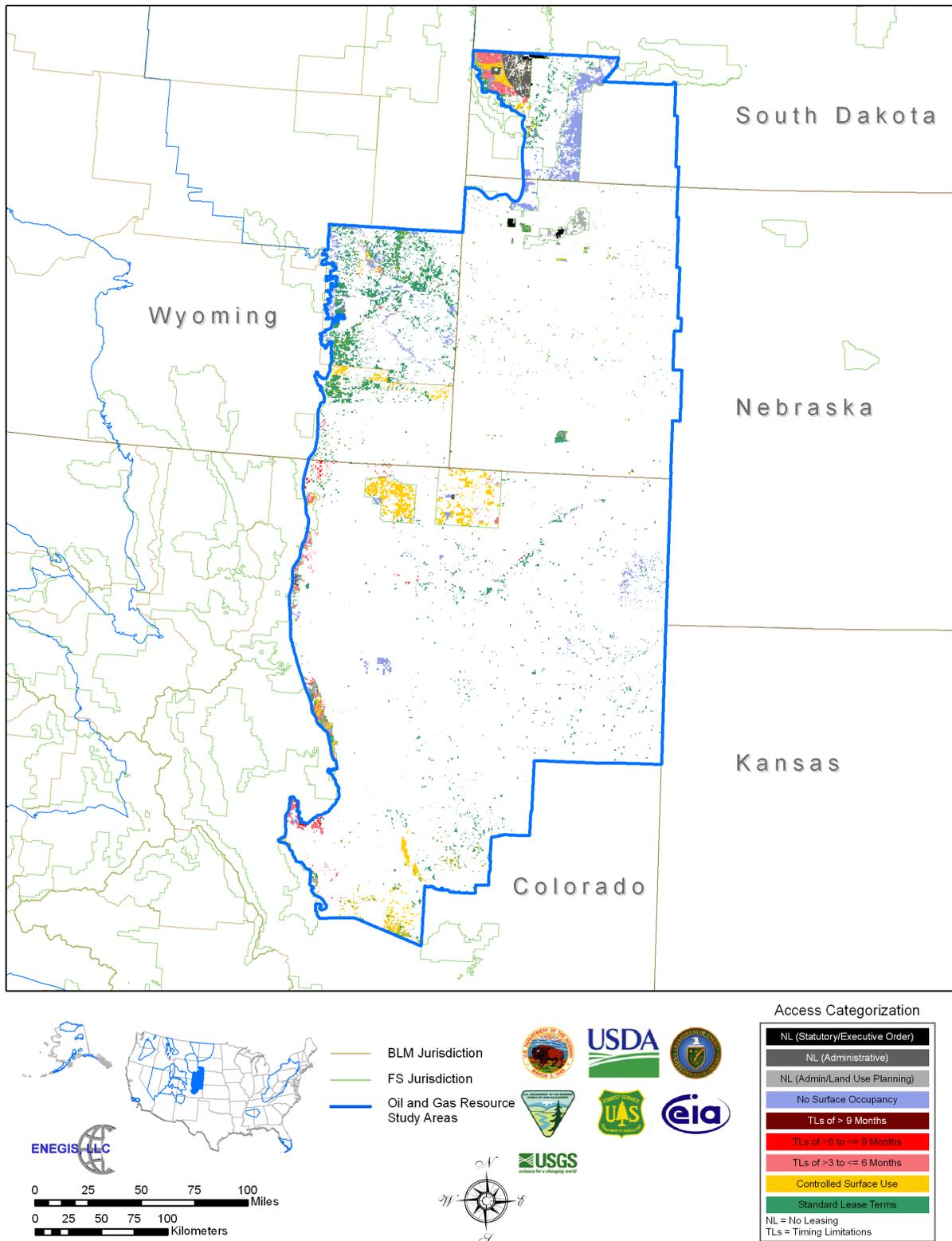


Figure 3-75. Federal Land Access Categorization Map, Denver Basin Study Area

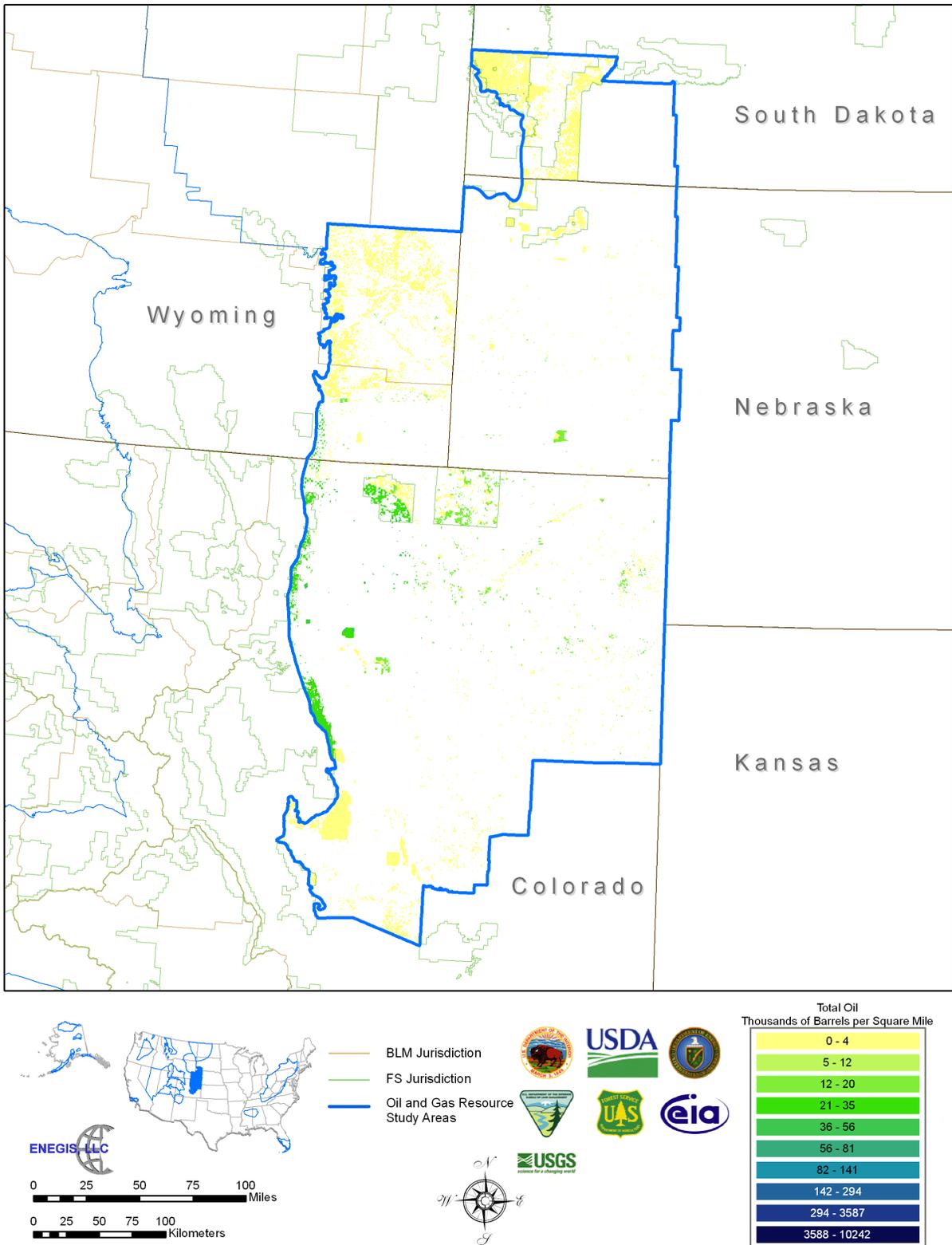


Figure 3-76. Map of Total Federal Oil, Denver Basin Study Area

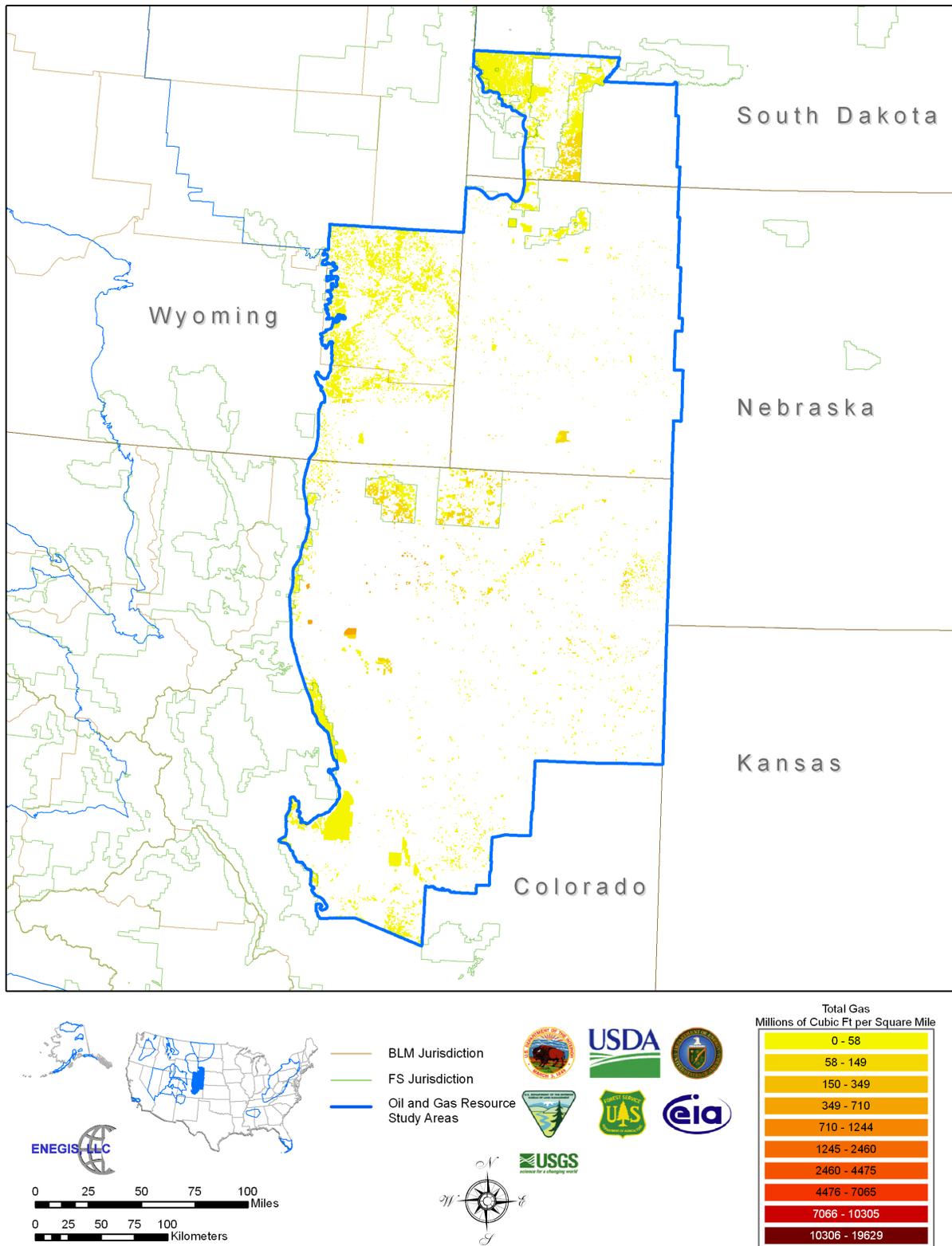


Figure 3-77. Map of Total Federal Natural Gas, Denver Basin Study Area

Table 3-17. Florida Peninsula Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
More Constrained  Less Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	4	0.2%	0	0.1%	0	0.0%
	2.	No Leasing (Administrative) (NLA)	3	0.1%	0	0.1%	0	0.1%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	1,376	69.3%	50	67.7%	217	67.2%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	487	24.5%	10	13.0%	43	13.4%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	-	0.0%	-	0.0%	-	0.0%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	114	5.7%	14	19.0%	62	19.3%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	-	0.0%	-	0.0%	-	0.0%
	8.	Leasing, Controlled Surface Use (CSU) ^d	1	0.0%	0	0.0%	0	0.0%
	9.	Leasing, Standard Lease Terms (SLTs)	1	0.1%	0	0.1%	0	0.1%
Total, Federal Lands including Split Estate			1,985	100.0%	74	100.0%	323	100.0%
Total Non-Federal			6,751		212		701	
Total Inventory Area			8,736		286		1,024	
Summary								
Inaccessible (Categories 1-4)			1,869	94%	60	81%	261	81%
Accessible with Restrictions (Categories 5-8)			114	6%	14	19%	62	19%
Accessible under Standard Lease Terms (Category 9)			1	0%	0	0%	0	0%
Total, Federal Lands Including Split Estate			1,985	100%	74	100%	323	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

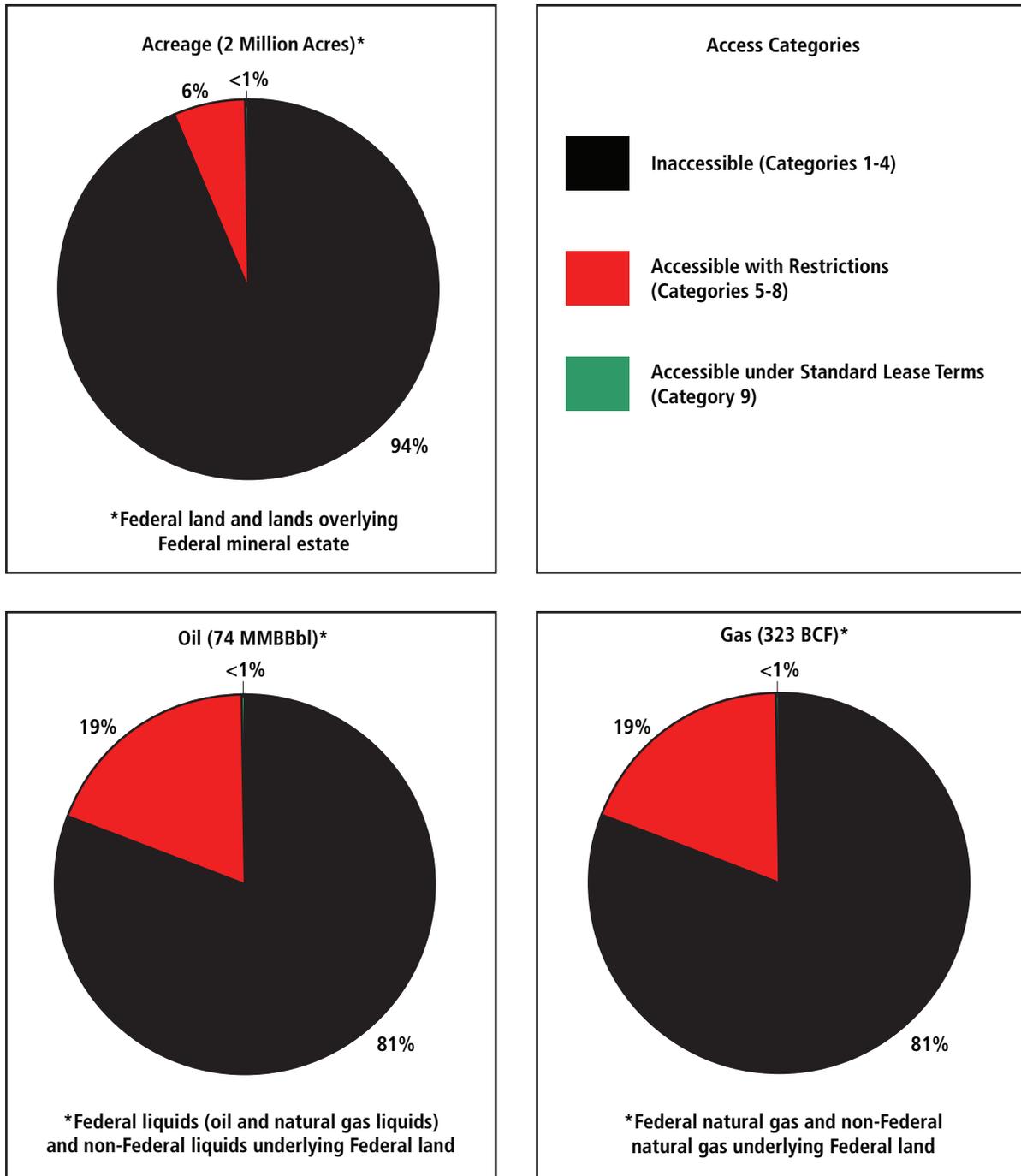


Figure 3-78. Simplified Chart of Results, Florida Peninsula Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

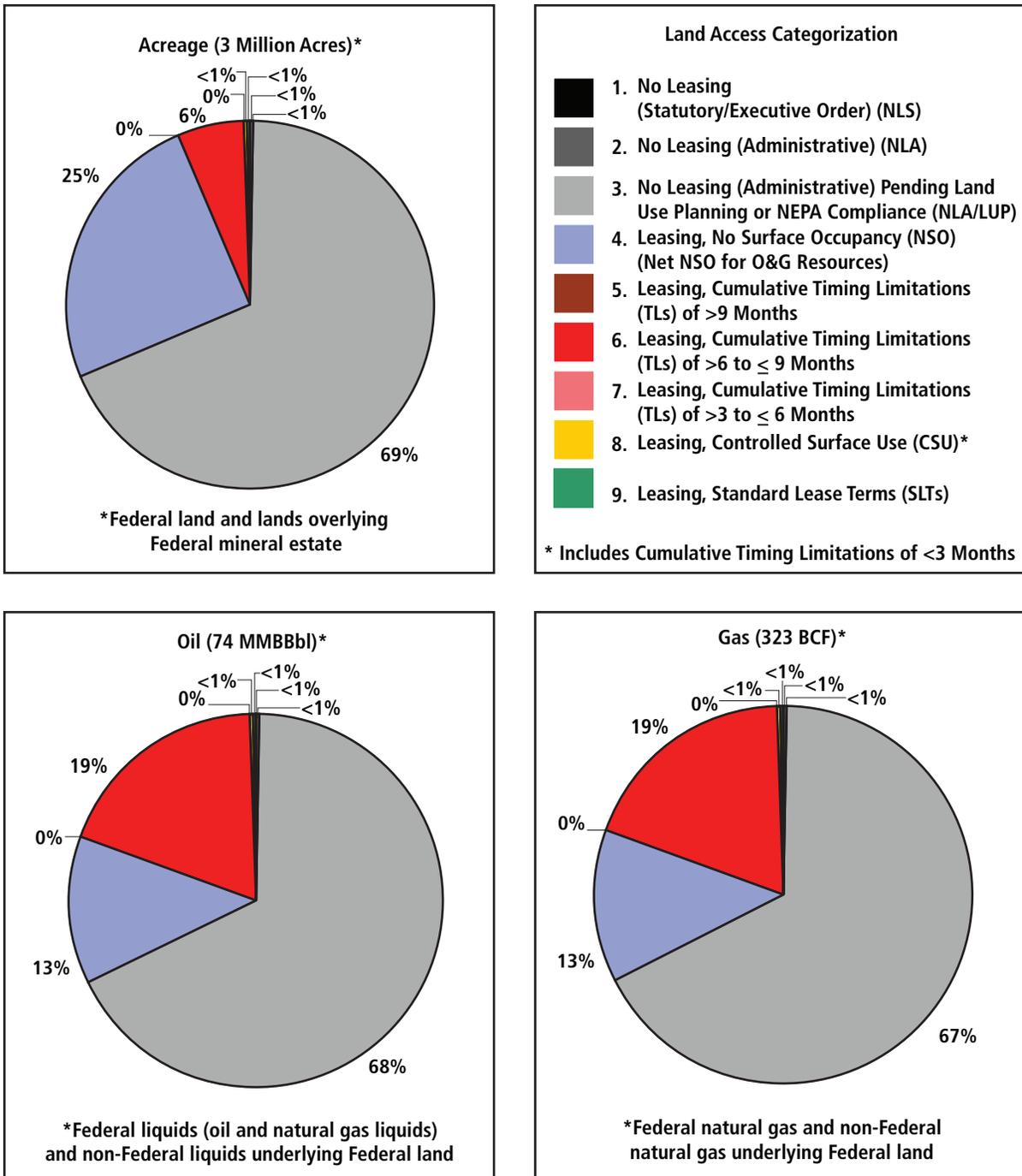


Figure 3-79. Chart of Results, Florida Peninsula Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

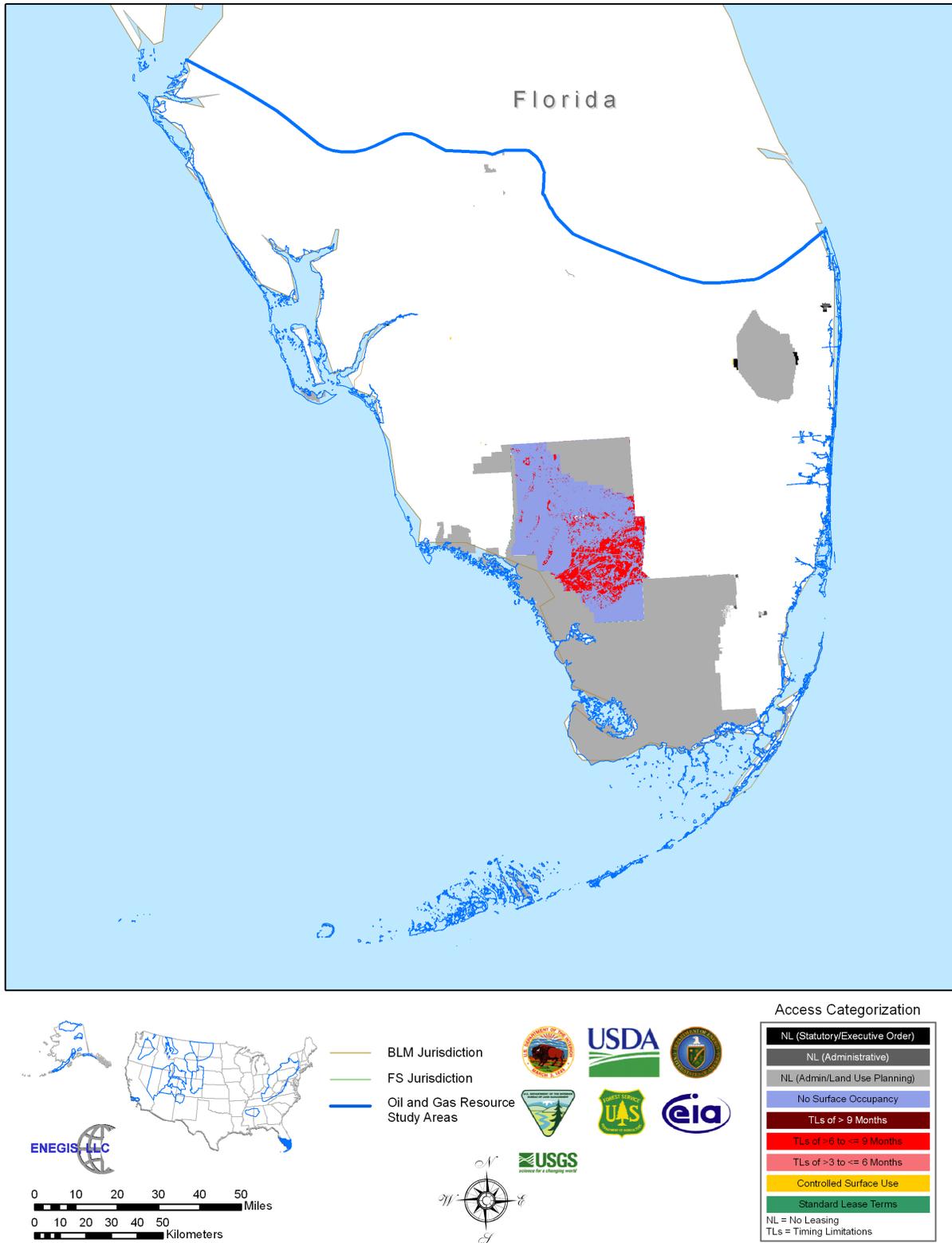


Figure 3-80. Federal Land Access Categorization Map, Florida Peninsula Study Area

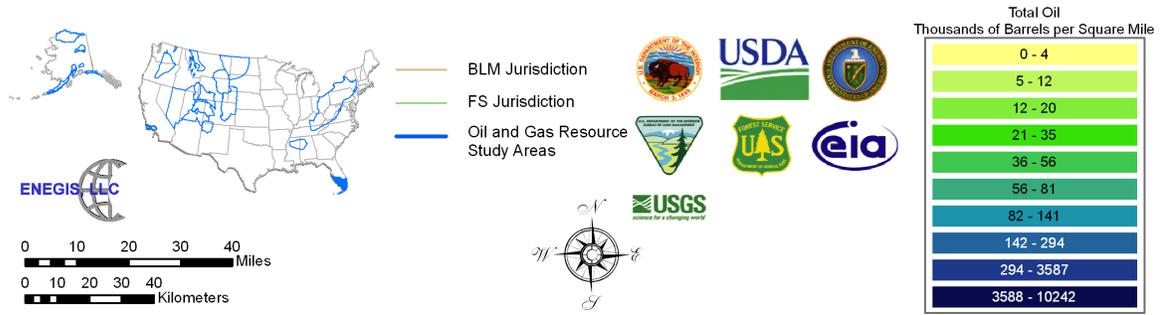
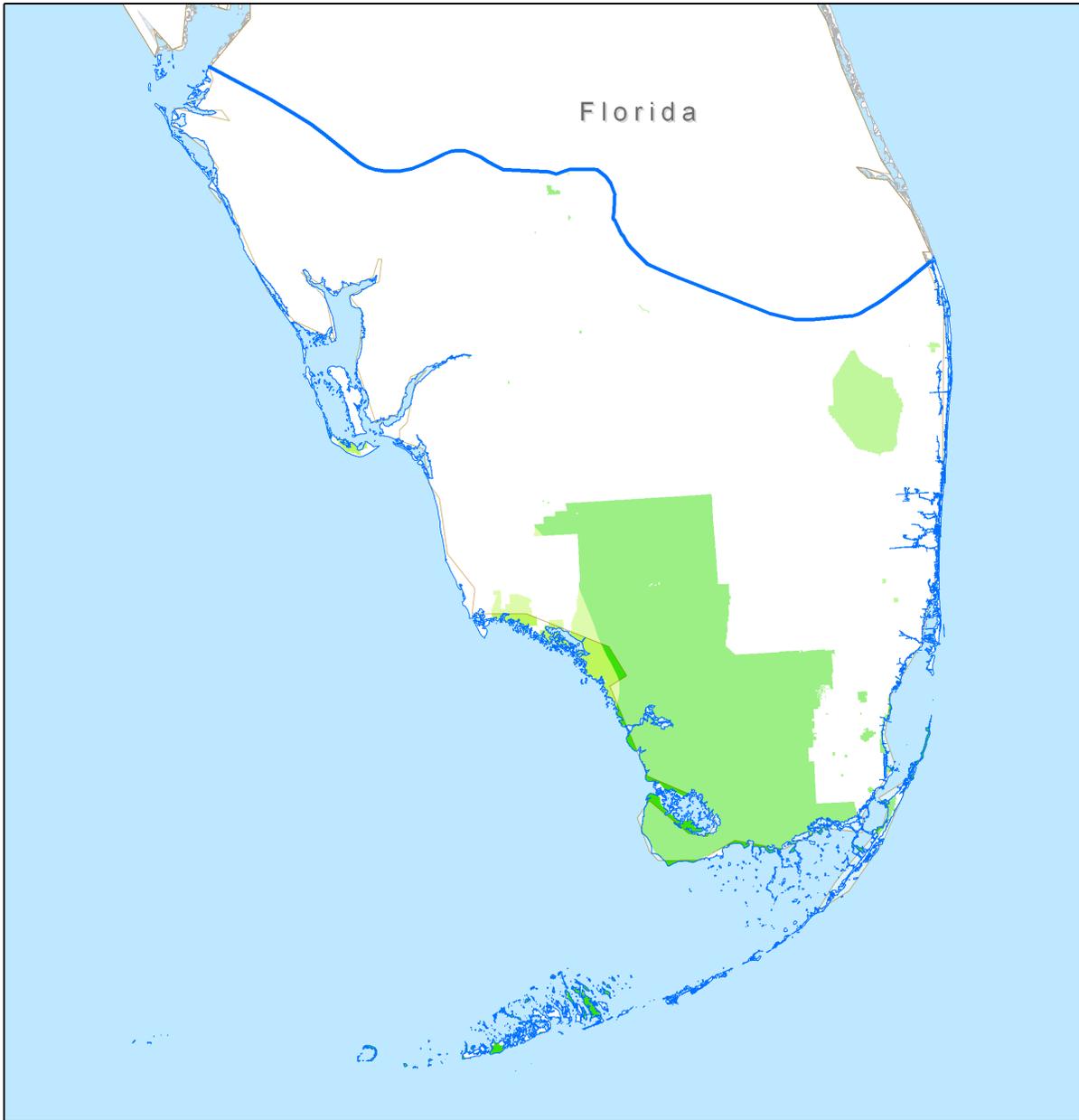


Figure 3-81. Map of Total Federal Oil, Florida Peninsula Study Area

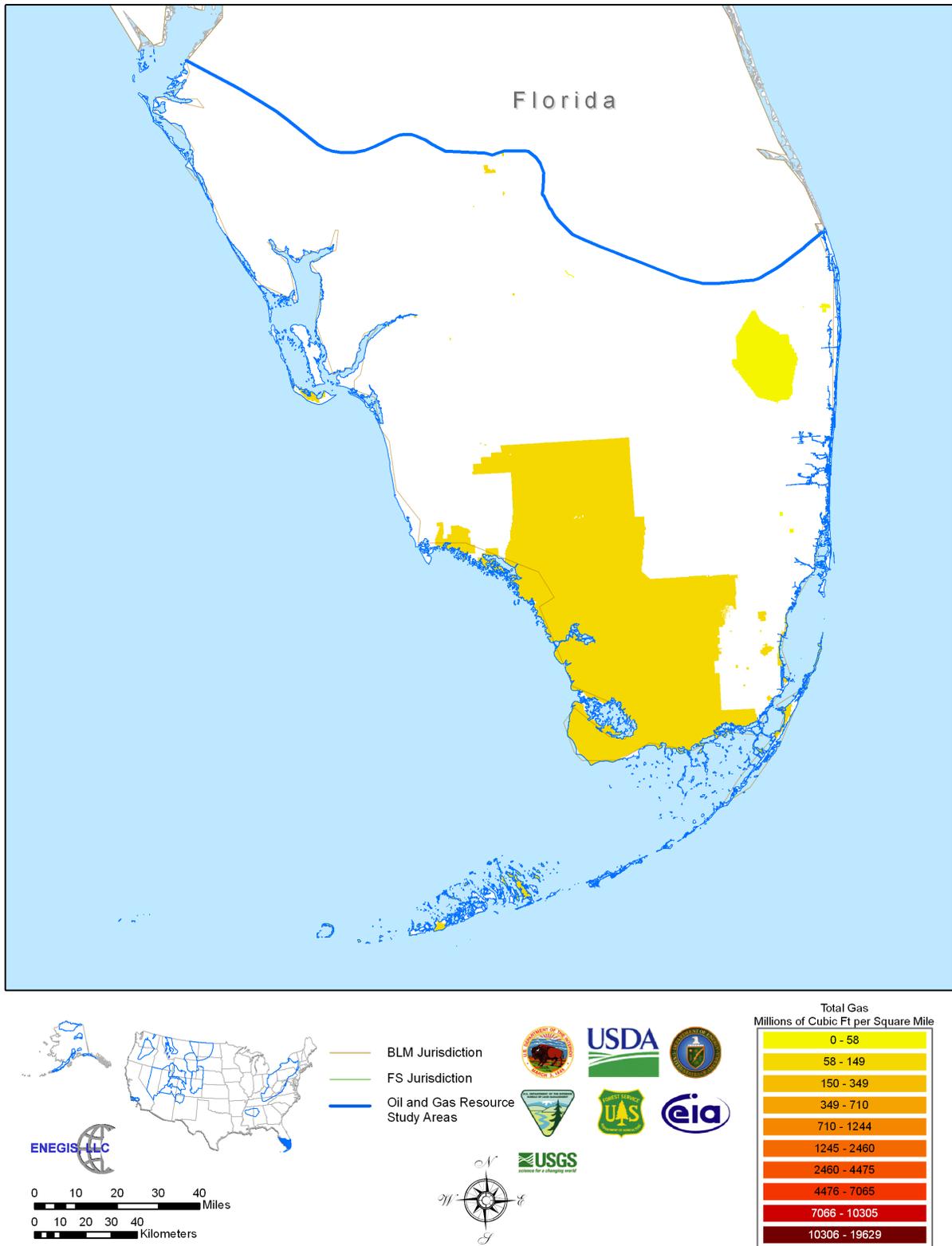


Figure 3-82. Map of Total Federal Natural Gas, Florida Peninsula Study Area

Table 3-18. Black Warrior Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
 More Constrained Less Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	1	0.1%	0	0.1%	0	0.0%
	2.	No Leasing (Administrative) (NLA)	3	0.4%	0	0.6%	5	1.2%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	382	55.0%	0	51.6%	163	41.7%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	189	27.2%	0	13.0%	59	15.2%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	-	0.0%	-	0.0%	-	0.0%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	3	0.4%	0	0.5%	0	0.1%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	-	0.0%	-	0.0%	-	0.0%
	8.	Leasing, Controlled Surface Use (CSU) ^d	95	13.6%	0	28.8%	126	32.2%
	9.	Leasing, Standard Lease Terms (SLTs)	22	3.1%	0	5.3%	37	9.6%
Total, Federal Lands including Split Estate			694	100.0%	1	100.0%	391	100.0%
Total Non-Federal			10,853		16		8,922	
Total Inventory Area			11,547		16		9,313	
Summary								
Inaccessible (Categories 1-4)			574	83%	1	65%	227	58%
Accessible with Restrictions (Categories 5-8)			98	14%	0	29%	126	32%
Accessible under Standard Lease Terms (Category 9)			22	3%	0	5%	37	10%
Total, Federal Lands Including Split Estate			694	100%	1	100%	391	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

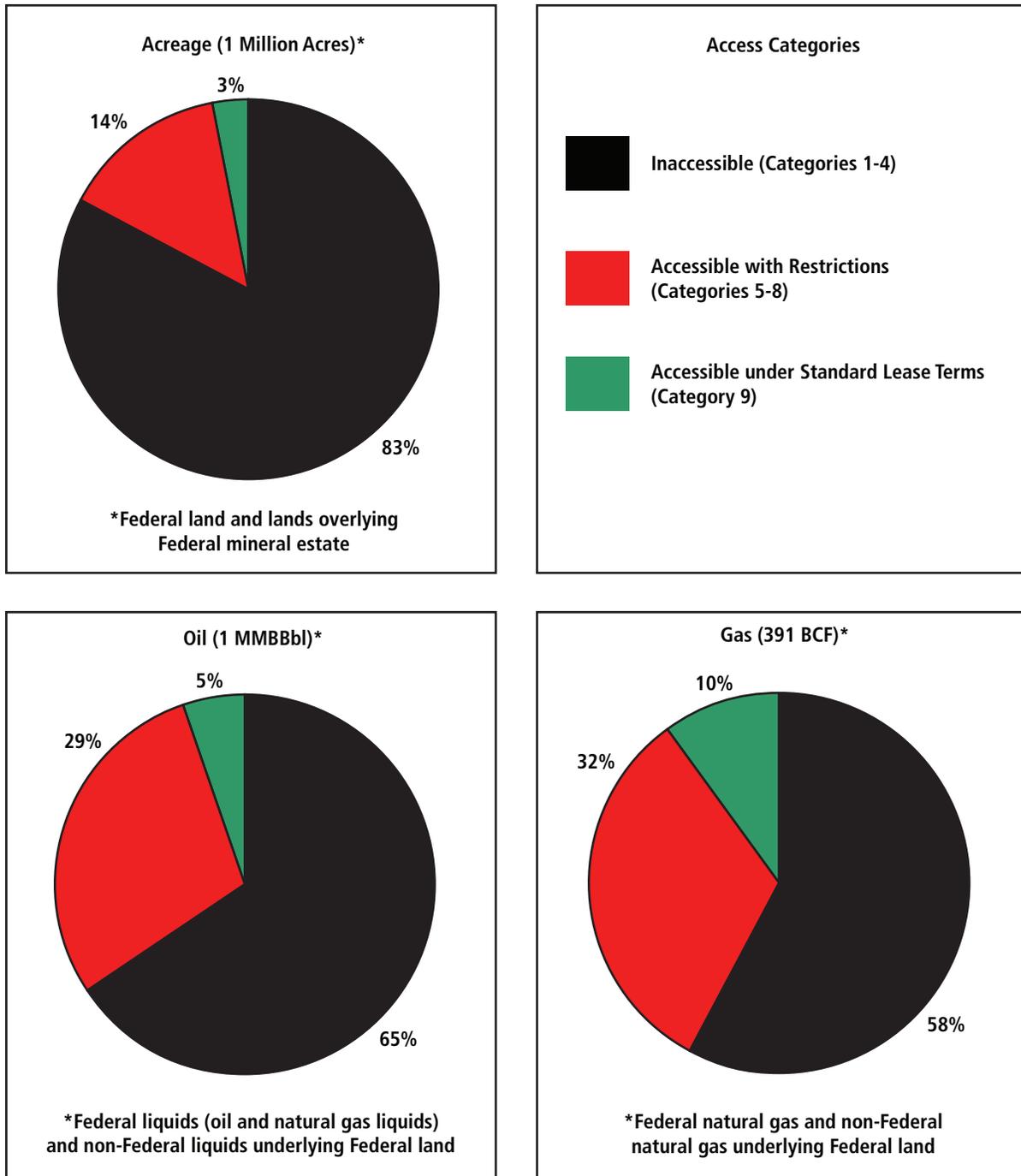


Figure 3-83. Simplified Chart of Results, Black Warrior Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

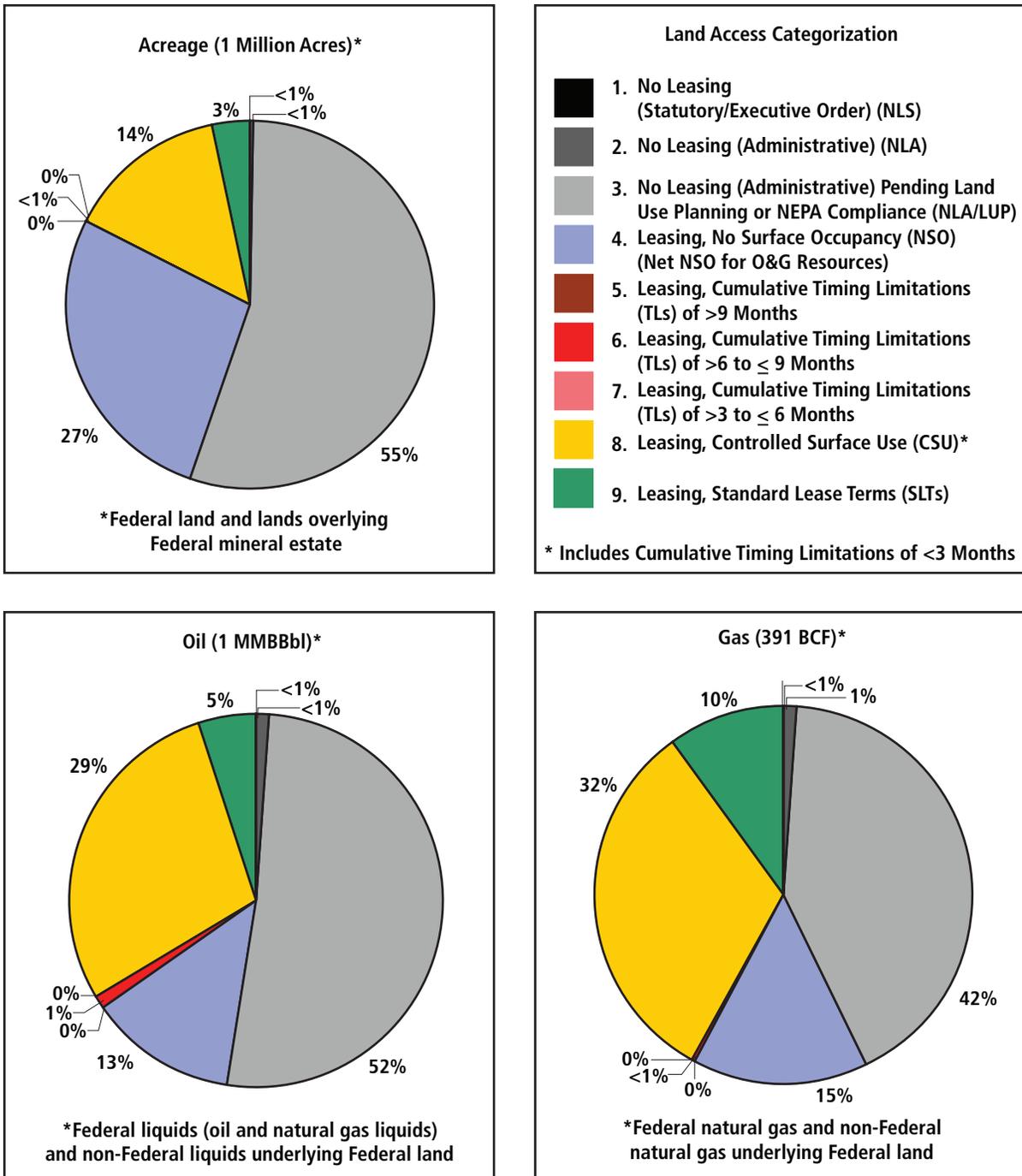


Figure 3-84. Chart of Results, Black Warrior Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

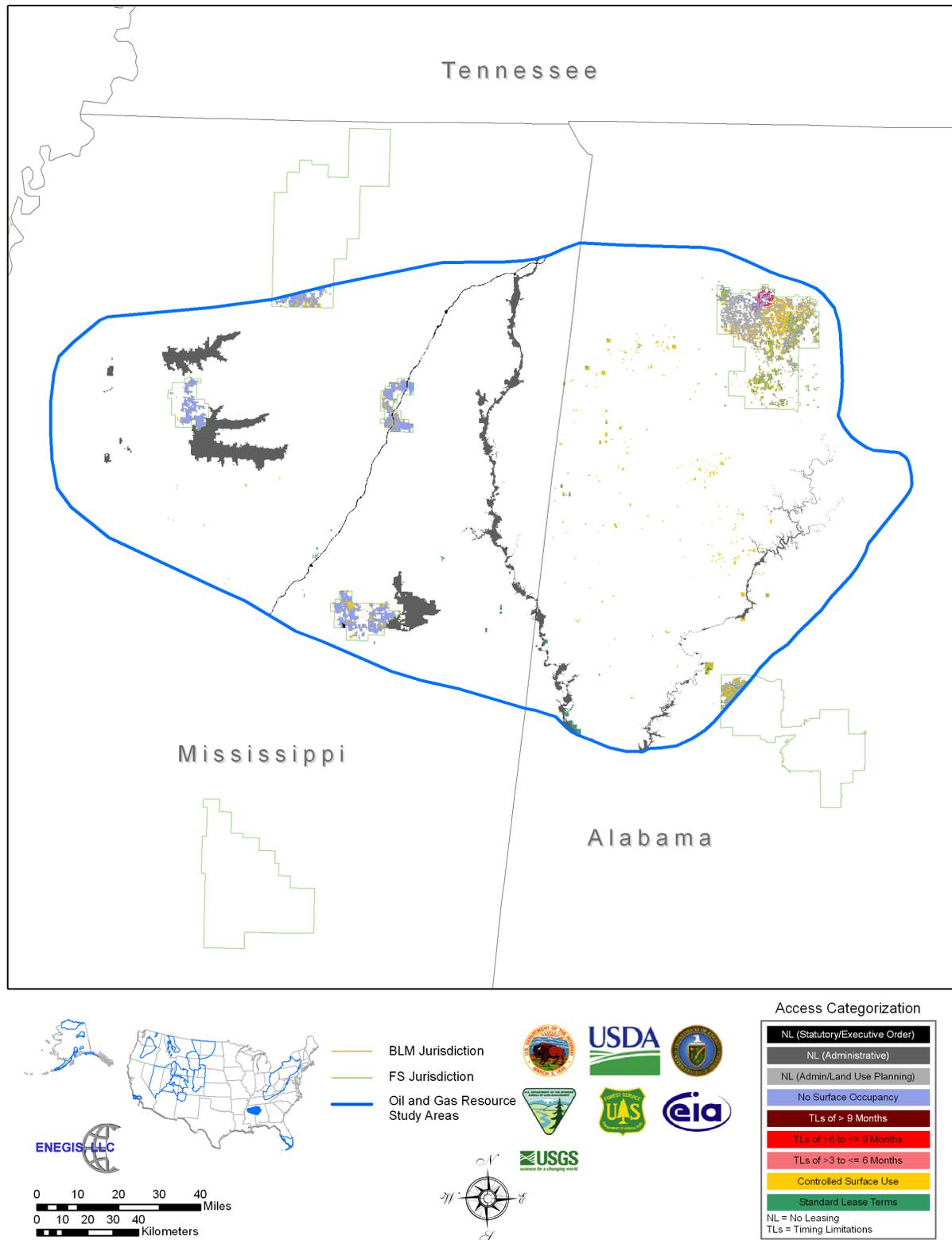


Figure 3-85. Federal Land Access Categorization Map, Black Warrior Basin Study Area

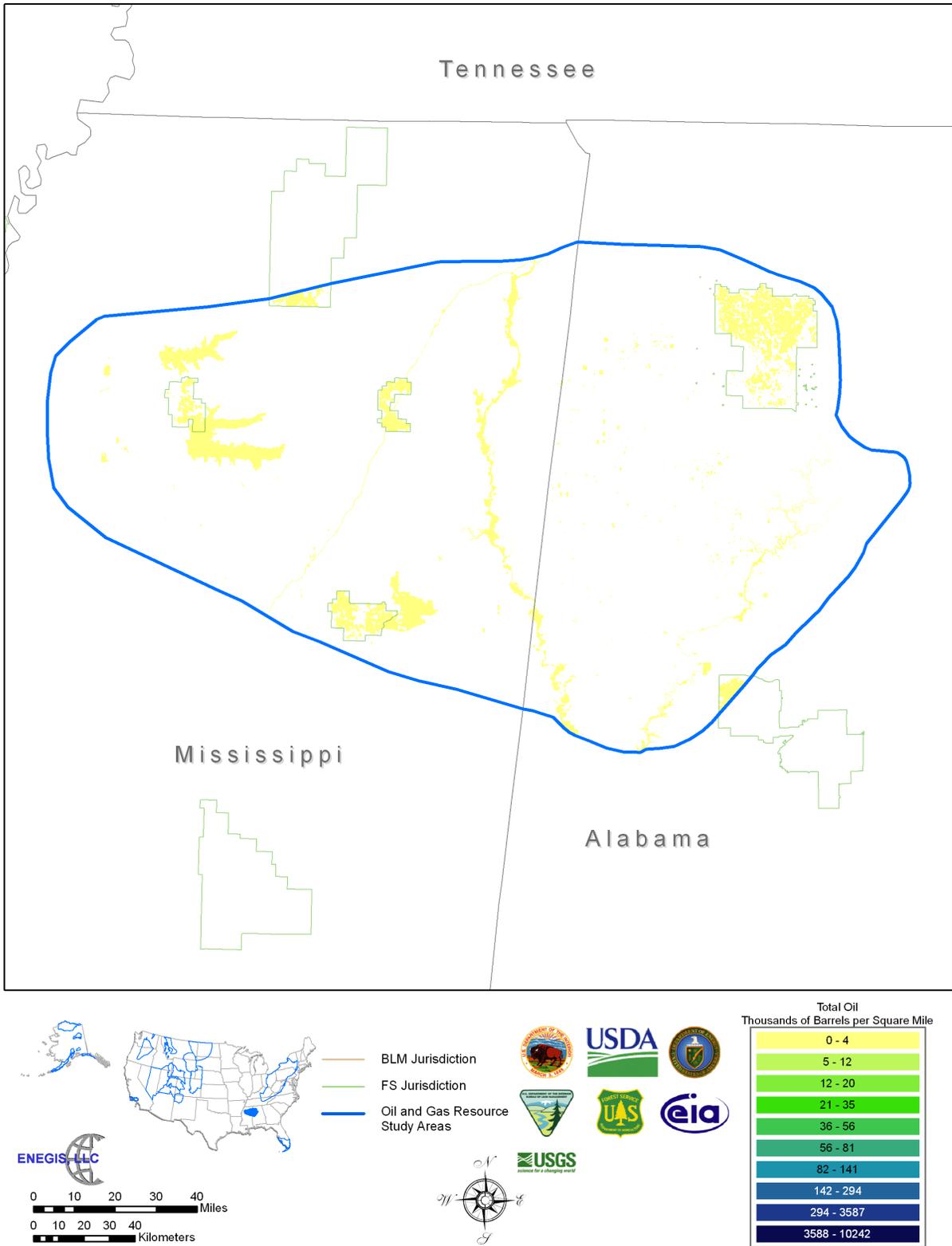


Figure 3-86. Map of Total Federal Oil, Black Warrior Basin Study Area

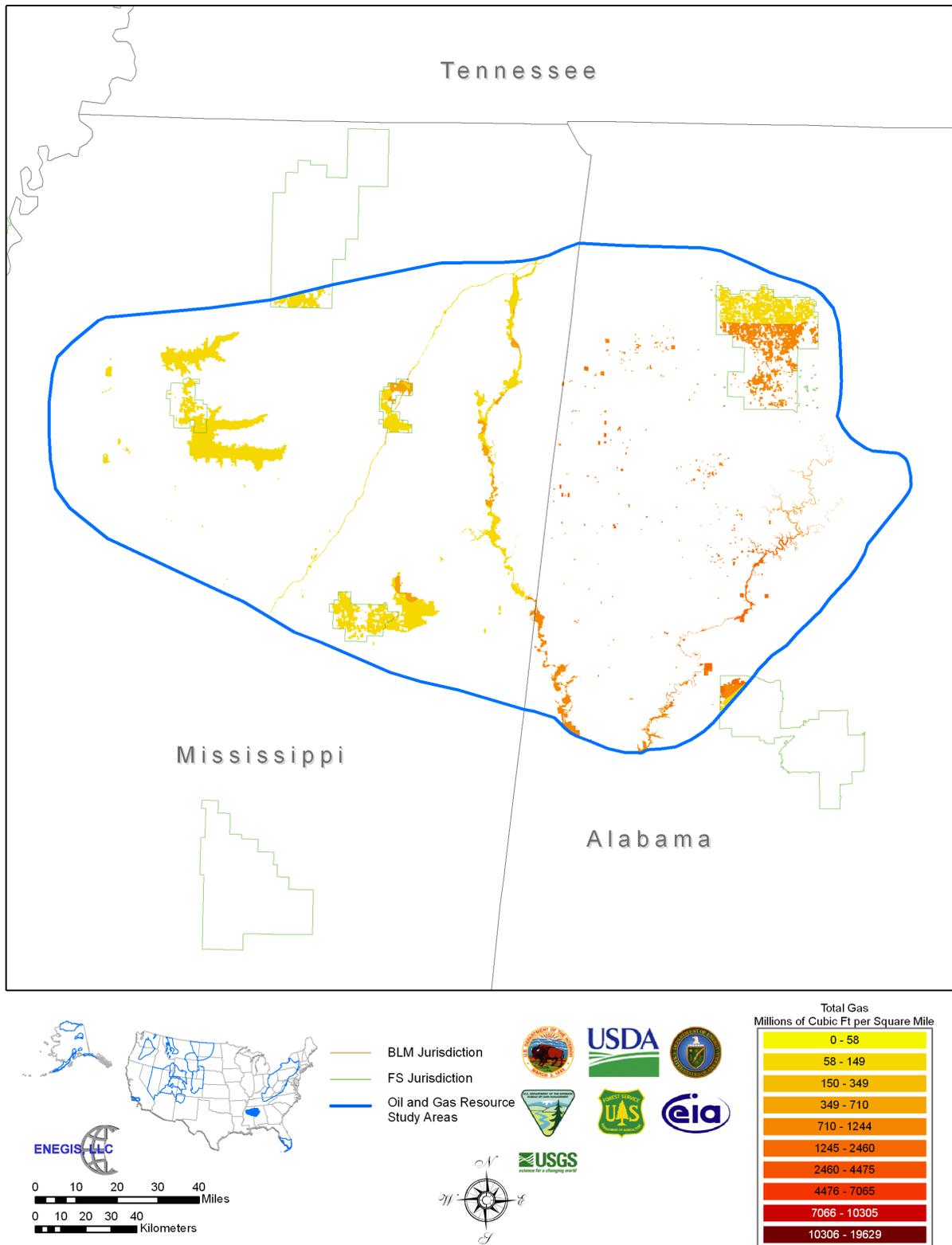


Figure 3-87. Map of Total Federal Natural Gas, Black Warrior Basin Study Area

- The Federal lands in this study area contain only about 1 MMbbls of oil out of a total of 13 MMbbls for all lands in the study area.
- This study area has significant split-estate lands comprising Federal surface and non-Federal mineral estate.

3.1.18 Appalachian Basin

- Approximately 46 percent (2.5 million acres) of the Federal land is not accessible (Figures 3-88 and 3-89, Categories 1 through 4). Based on resource estimates, these lands contain 40 percent (13.4 MMbbls) of the Federal oil and 41 percent (984.7 BCF) of the Federal natural gas.
- Approximately 42 percent (2.2 million acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-88 and 3-89, Categories 5 through 8). Based on resource estimates, these lands contain 48 percent (16.0 MMbbls) of the Federal oil and 45 percent (1.1 TCF) of the Federal natural gas.
- Approximately 13 percent (691.7 thousand acres) of the Federal land is accessible under standard lease terms (Figures 3-88 and 3-89, Category 9). Based on resource estimates, these lands contain 12 percent (3.9 MMbbls) of the Federal oil and 14 percent (346.7 BCF) of the Federal natural gas.
- Most of the undiscovered gas resource (94 percent) is expected to occur in continuous accumulations.
- Coalbed natural gas accounts for about 13 percent of the total undiscovered continuous gas.

3.1.19 Extrapolated Results for Alaska

- Approximately 96 percent (35.7 million acres) of the Federal land is not accessible (Figures 3-93 and 3-94, Categories 1 through 4). Based on resource estimates, these lands contain 89 percent (557 MMbbls) of the Federal oil and 90 percent (2,108 BCF) of the Federal natural gas.
- Approximately 4 percent (1.7 million acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-93 and 3-94, Categories 5 through 8). Based on resource estimates, these lands contain 11 percent (66 MMbbls) of the Federal oil and 10 percent (227 BCF) of the Federal natural gas.
- Less than 1 percent (70 thousand acres) of the Federal land is accessible under standard lease terms (Figures 3-93 and 3-94, Category 9). Based on resource estimates, these lands contain no significant Federal oil or natural gas resources.

3.1.20 Extrapolated Results for the Western Region

- Approximately 55 percent (25.2 million acres) of the Federal land is not accessible (Figures 3-95 and 3-96, Categories 1 through 4). Based on resource estimates, these lands contain 57 percent (2,890 MMbbls) of the Federal oil and 58 percent (8,529 BCF) of the Federal natural gas.

Table 3-19. Appalachian Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
More Constrained ↑ Less Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	130	2.4%	0	1.4%	33	1.4%
	2.	No Leasing (Administrative) (NLA)	108	2.0%	1	2.9%	93	3.8%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	1,543	28.7%	11	31.7%	774	32.0%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	673	12.5%	1	4.1%	85	3.5%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	-	0.0%	0	0.0%	0	0.0%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	95	1.8%	1	3.3%	72	3.0%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	340	6.3%	2	6.5%	145	6.0%
	8.	Leasing, Controlled Surface Use (CSU) ^d	1,796	33.4%	13	38.3%	875	36.1%
	9.	Leasing, Standard Lease Terms (SLTs)	691	12.9%	4	11.8%	347	14.3%
Total, Federal Lands including Split Estate			5,377	100.0%	33	100.0%	2,423	100.0%
Total Non-Federal			93,175		858		65,271	
Total Inventory Area			98,551		891		67,694	
Summary								
Inaccessible (Categories 1-4)			2,454	46%	13	40%	985	41%
Accessible with Restrictions (Categories 5-8)			2,232	42%	16	48%	1,091	45%
Accessible under Standard Lease Terms (Category 9)			691	13%	4	12%	347	14%
Total, Federal Lands Including Split Estate			5,377	100%	33	100%	2,423	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

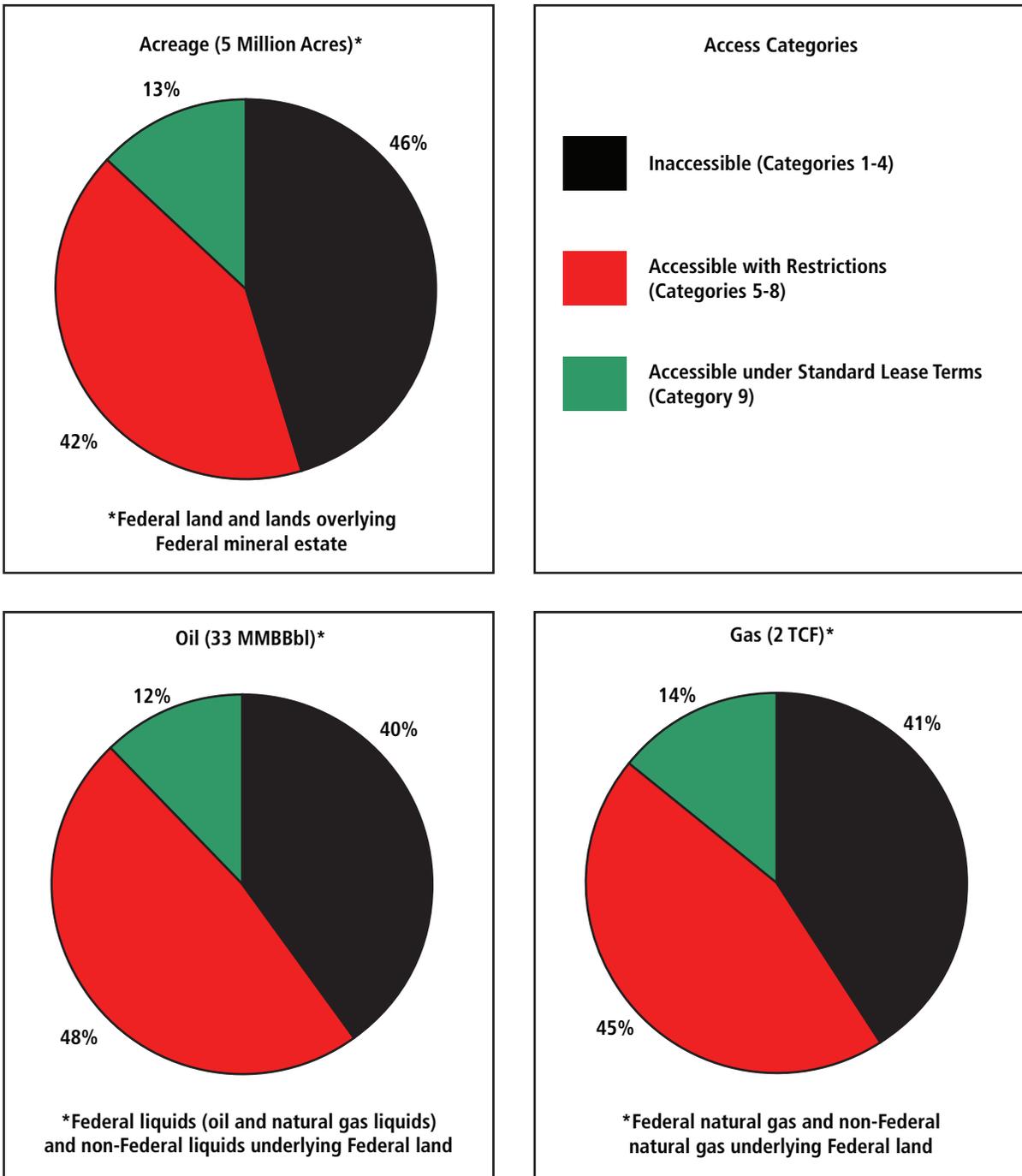


Figure 3-88. Simplified Chart of Results, Appalachian Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility

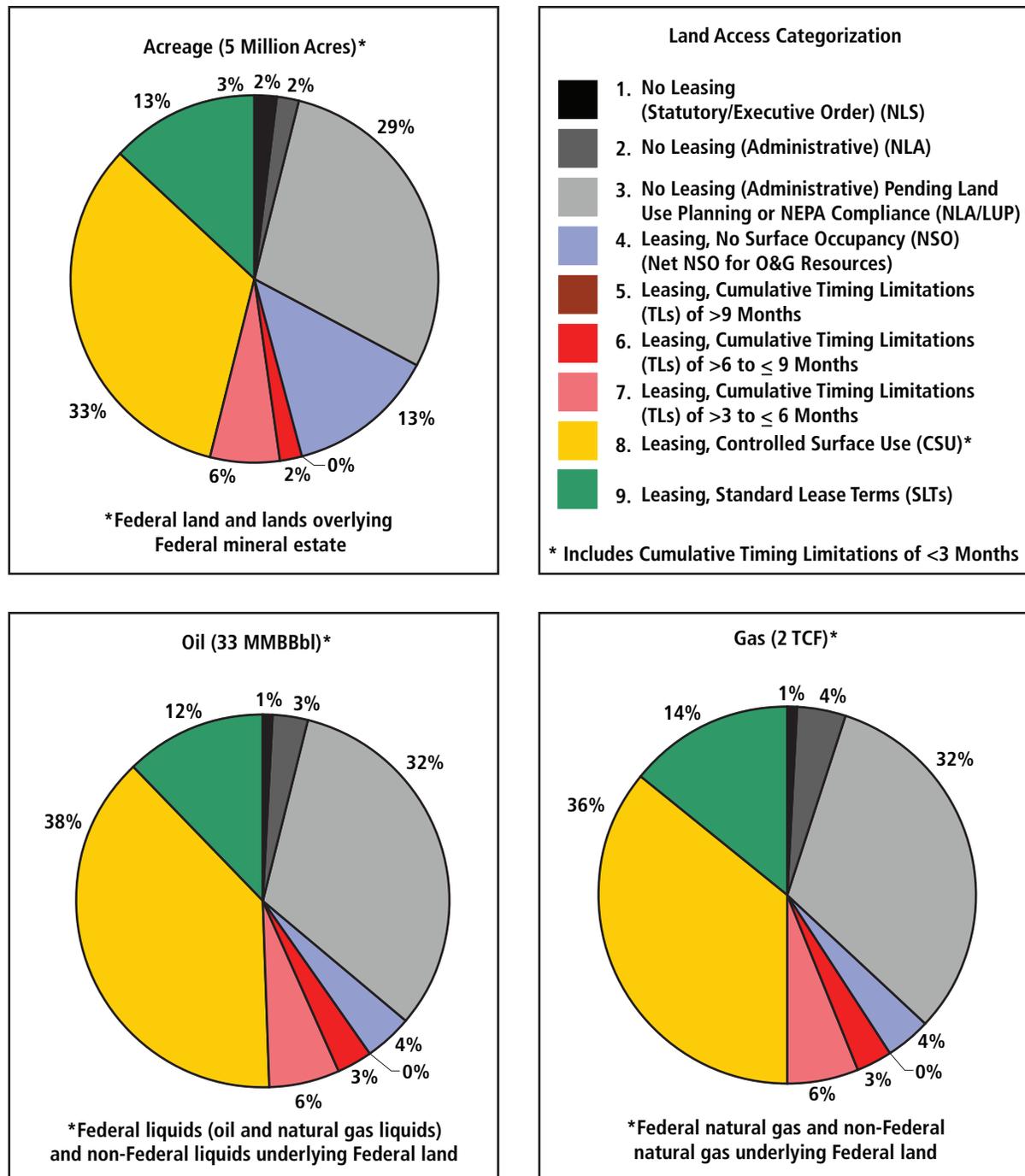


Figure 3-89. Chart of Results, Appalachian Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

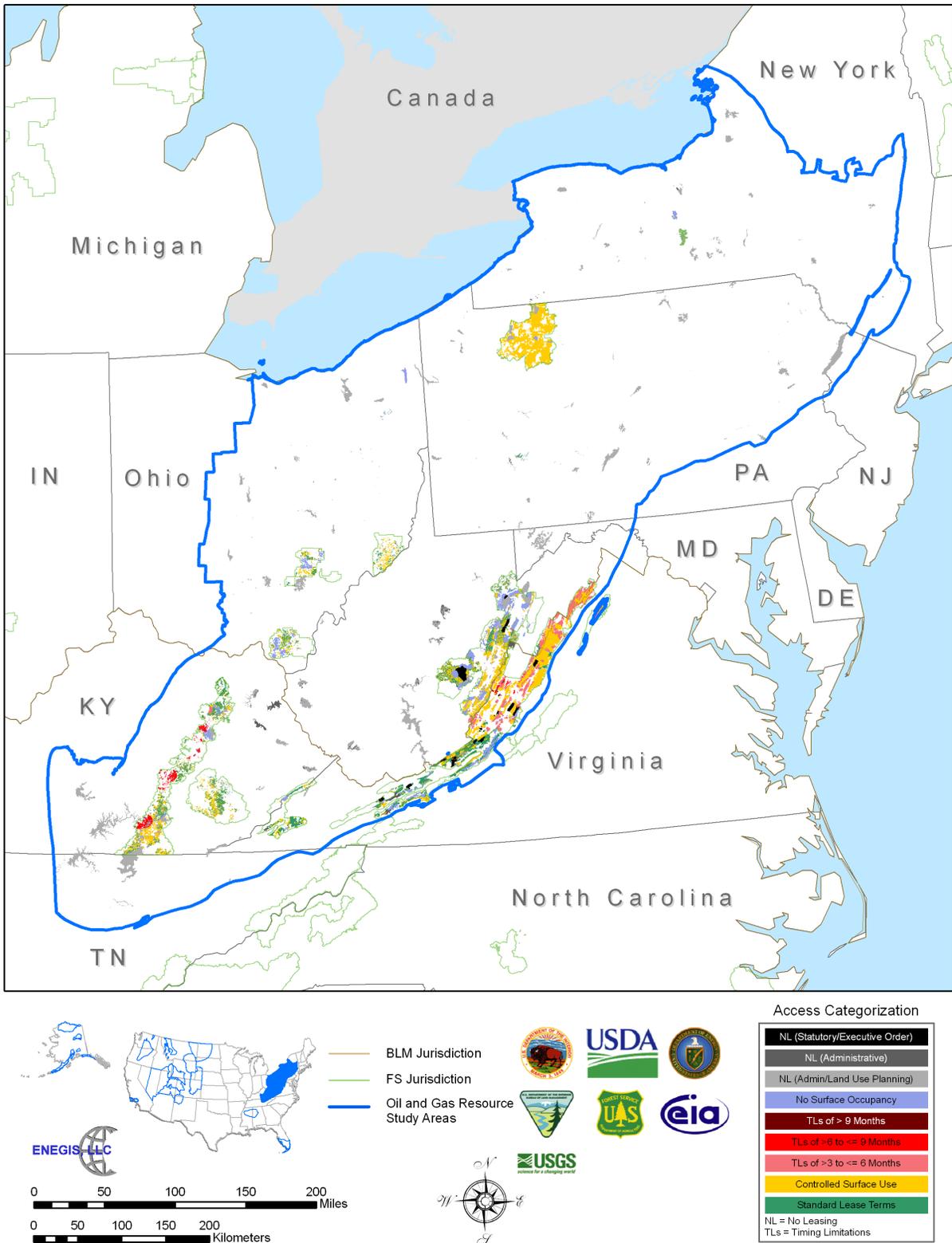


Figure 3-90. Federal Land Access Categorization Map, Appalachian Basin Study Area

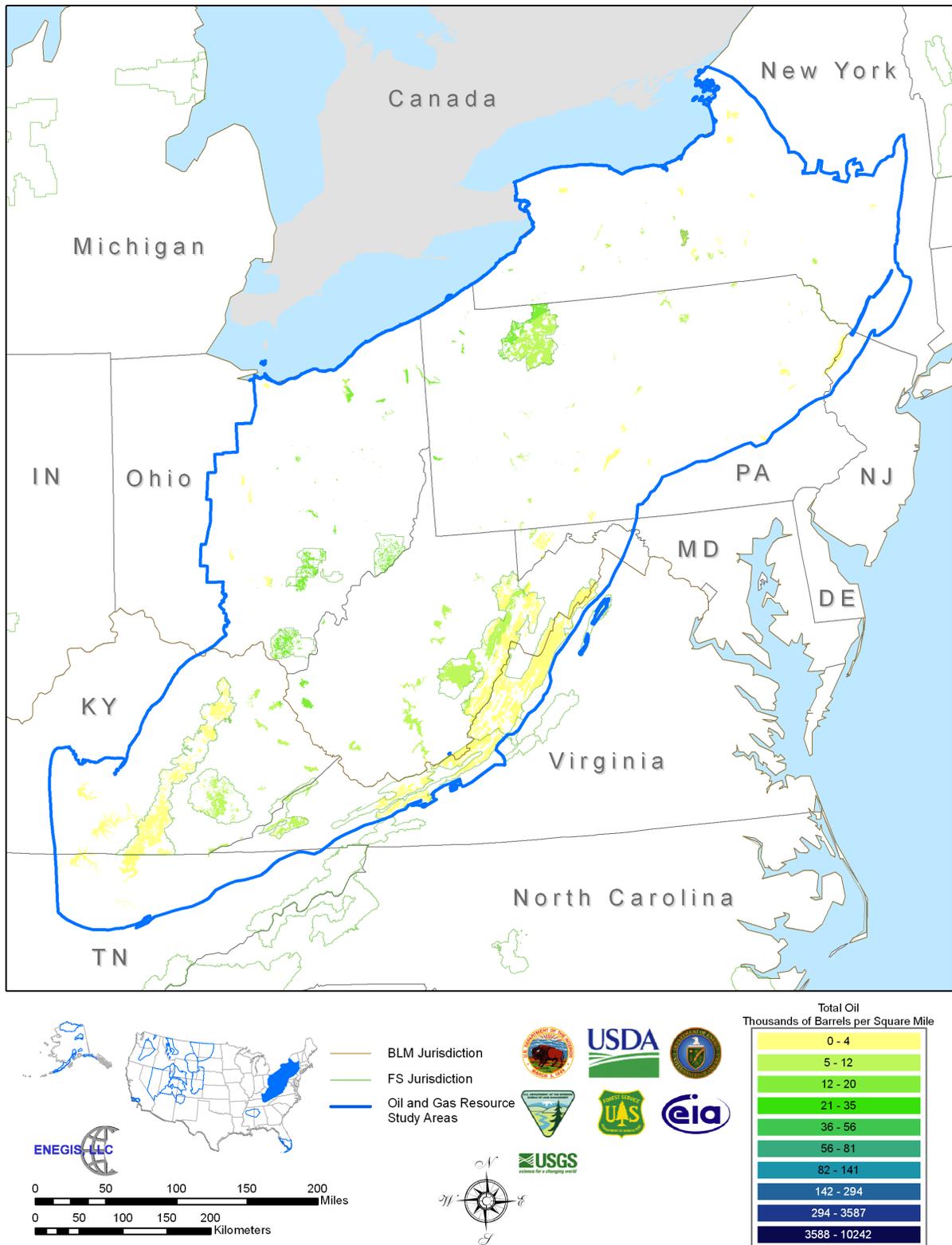


Figure 3-91. Map of Total Federal Oil, Appalachian Basin Study Area

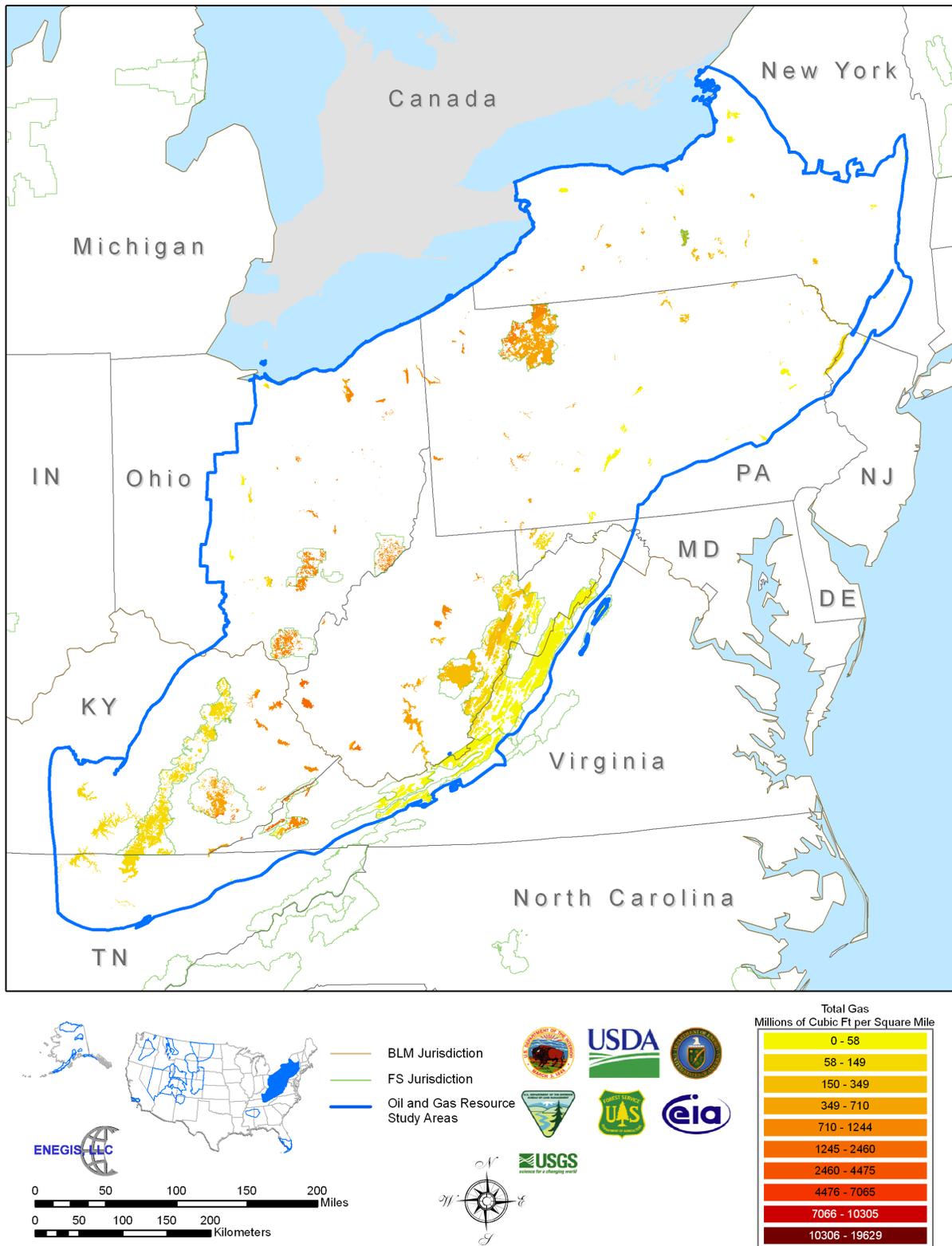


Figure 3-92. Map of Total Federal Natural Gas, Appalachian Basin Study Area

Table 3-20. Extrapolated Results for Alaska — Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
More Constrained ↑ Less Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	9,036	24.2%	414	66.4%	542	23.2%
	2.	No Leasing (Administrative) (NLA)	23,380	62.5%	12	1.9%	1,117	47.8%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	3,241	8.7%	128	20.6%	441	18.9%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	61	0.2%	2	0.4%	8	0.4%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	-	0.0%	-	0.0%	-	0.0%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	1,556	4.2%	62	9.9%	212	9.1%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	57	0.2%	2	0.4%	8	0.3%
	8.	Leasing, Controlled Surface Use (CSU) ^d	56	0.2%	2	0.4%	8	0.3%
	9.	Leasing, Standard Lease Terms (SLTs)	1	0.0%	0	0.0%	0	0.0%
Total, Federal Lands including Split Estate			37,388	100.0%	623	100.0%	2,335	100.0%
Total Non-Federal			14,462		138		1,913	
Total Inventory Area			51,850		761		4,248	
Summary								
Inaccessible (Categories 1-4)			35,718	96%	557	89%	2,108	90%
Accessible with Restrictions (Categories 5-8)			1,669	4%	66	11%	227	10%
Accessible under Standard Lease Terms (Category 9)			1	0%	0	0%	0	0%
Total, Federal Lands Including Split Estate			37,388	100%	623	100%	2,335	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

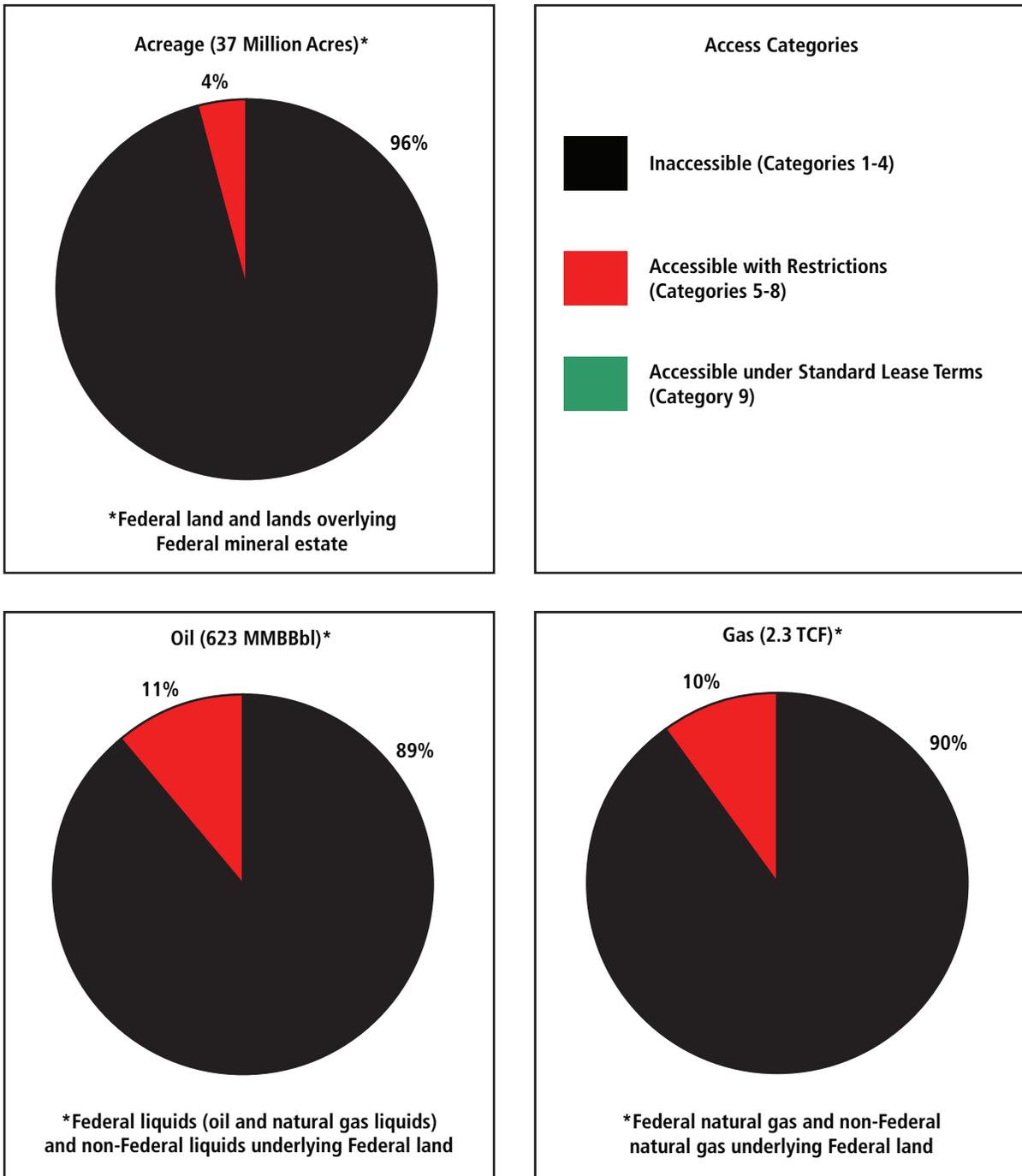


Figure 3-93. Simplified Chart of Results, Extrapolated Results for Alaska—Federal Land and Oil and Natural Gas Resources by Accessibility

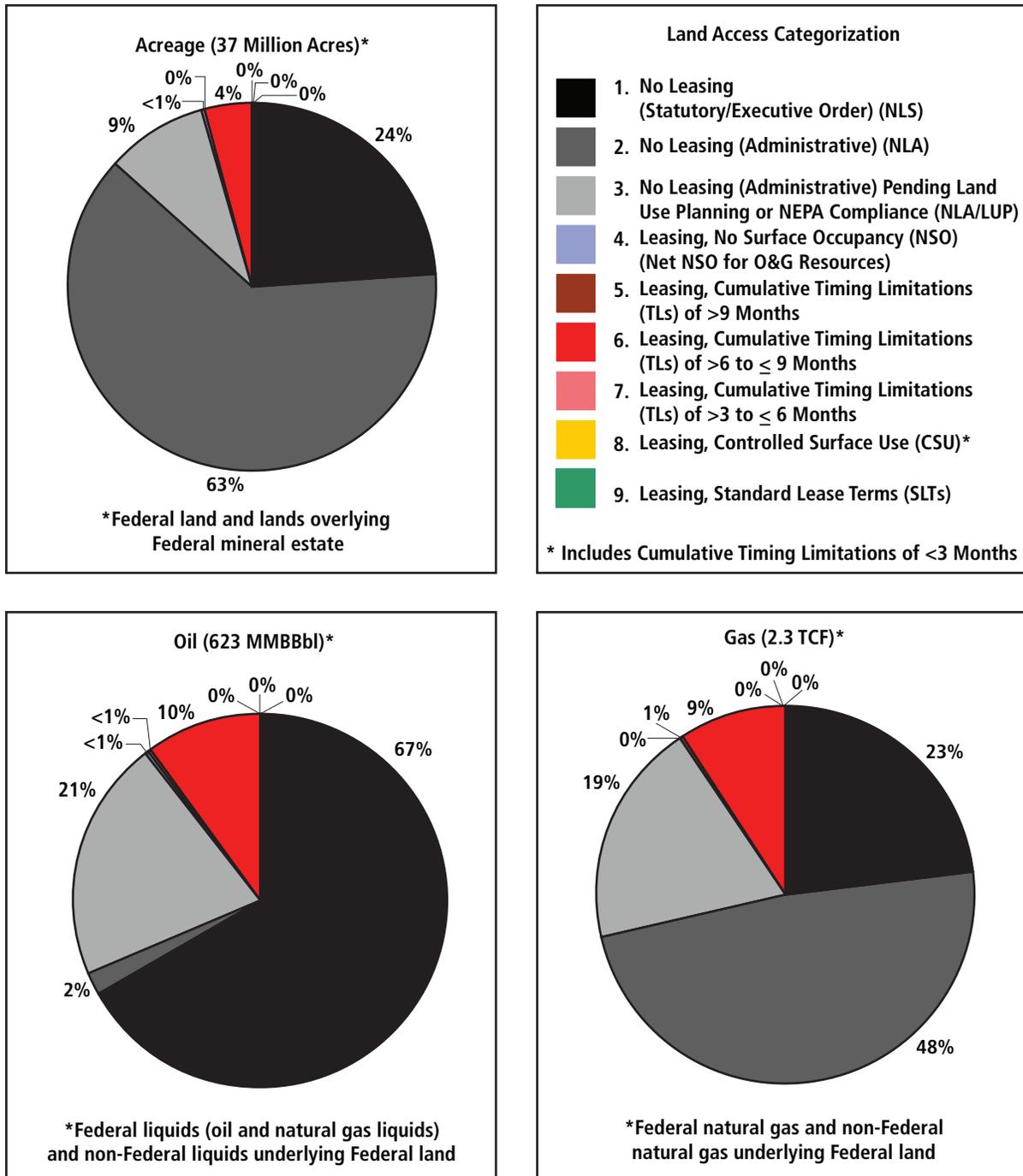


Figure 3-94. Chart of Results, Extrapolated Results for Alaska—Federal Land and Oil and Natural Gas Resources by Access Category

- Approximately 23 percent (10.3 million acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-95 and 3-96, Categories 5 through 8). Based on resource estimates, these lands contain 21 percent (1,068 MMbbls) of the Federal oil and 21 percent (3,071 BCF) of the Federal natural gas.
- Approximately 22 percent (10.2 million acres) of the Federal land is accessible under standard lease terms (Figures 3-95 and 3-96, Category 9). Based on resource estimates, these lands contain 22 percent (1,106 MMbbls) of the Federal oil and 21 percent (3,131 BCF) of the Federal natural gas.

3.1.21 Extrapolated Results for the Eastern Region

- Approximately 41 percent (5.1 million acres) of the Federal land is not accessible (Figures 3-97 and 3-98, Categories 1 through 4). Based on resource estimates, these lands contain 27 percent (25.0 MMbbls) of the Federal oil and 31 percent (449.5 BCF) of the Federal natural gas.
- Approximately 47 percent (5.8 million acres) of the Federal land is accessible with restrictions on oil and gas operations beyond standard lease terms (Figures 3-97 and 3-98, Categories 5 through 8). Based on resource estimates, these lands contain 58 percent (54.2 MMbbls) of the Federal oil and 55 percent (782.5 BCF) of the Federal natural gas.
- Approximately 12 percent (1.51 million acres) of the Federal land is accessible under standard lease terms (Figures 3-97 and 3-98, Category 9). Based on resource estimates, these lands contain

15 percent (14.0 MMbbls) of the Federal oil and 14 percent (202.8 BCF) of the Federal natural gas.

3.2 Regional Features

Figure 3-99 compares the access charts for the top five basins in each of the following categories: total Federal land, total Federal oil, and total Federal natural gas. The pie chart areas are scaled proportionately to one another within each category. Northern Alaska dominates both the resource categories, followed by the Rocky Mountain basins; however, the Eastern Great Basin contains the most Federal land.

Figure 3-100 is a map showing the Inventory study areas and extrapolated areas with the access category charts compiled by region, relatively sized, by total resources. The largest amount of oil and gas resources are found in the Western Region (206.4 quadrillion BTU). Alaska is second (195.7 quadrillion BTU), followed by the Eastern Region, a distant third in rank (5.7 quadrillion BTU).

About 35 percent of the resources in the Western Region are inaccessible, 37 percent are accessible with additional restrictions (primarily because of timing limitations and the impact of COAs), and 29 percent are accessible under standard lease terms.

About 73 percent of the resources in the Alaska Region are inaccessible, 27 percent are accessible with additional restrictions, and less than 1 percent are accessible under standard lease terms.

About 49 percent of the resources in the Eastern Region are inaccessible, 39 percent are accessible with additional restrictions, and 12 percent are accessible under standard lease terms.

Table 3-21 Extrapolated Results for the Western Region — Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
More Constrained ↑ Less Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	6,157	13.5%	786	15.5%	1,617	11.0%
	2.	No Leasing (Administrative) (NLA)	6,939	15.2%	801	15.8%	3,363	22.8%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	8,847	19.4%	934	18.5%	2,570	17.4%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	3,213	7.0%	368	7.3%	978	6.6%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	70	0.2%	7	0.1%	20	0.1%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	564	1.2%	54	1.1%	171	1.2%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	3,560	7.8%	355	7.0%	1,048	7.1%
	8.	Leasing, Controlled Surface Use (CSU) ^d	6,101	13.4%	652	12.9%	1,832	12.4%
	9.	Leasing, Standard Lease Terms (SLTs)	10,208	22.4%	1,106	21.8%	3,131	21.3%
Total, Federal Lands including Split Estate			45,660	100.0%	5,064	100.0%	14,731	100.0%
Total Non-Federal			429,802		40,816		187,098	
Total Inventory Area			475,462		45,879		201,829	
Summary								
Inaccessible (Categories 1-4)			25,157	55%	2,890	57%	8,529	58%
Accessible with Restrictions (Categories 5-8)			10,295	23%	1,068	21%	3,071	21%
Accessible under Standard Lease Terms (Category 9)			10,208	22%	1,106	22%	3,131	21%
Total, Federal Lands Including Split Estate			45,660	100%	5,064	100%	14,731	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs^c Including associated dissolved and nonassociated natural gas^d Includes Cumulative Timing Limitations of ≤3 months

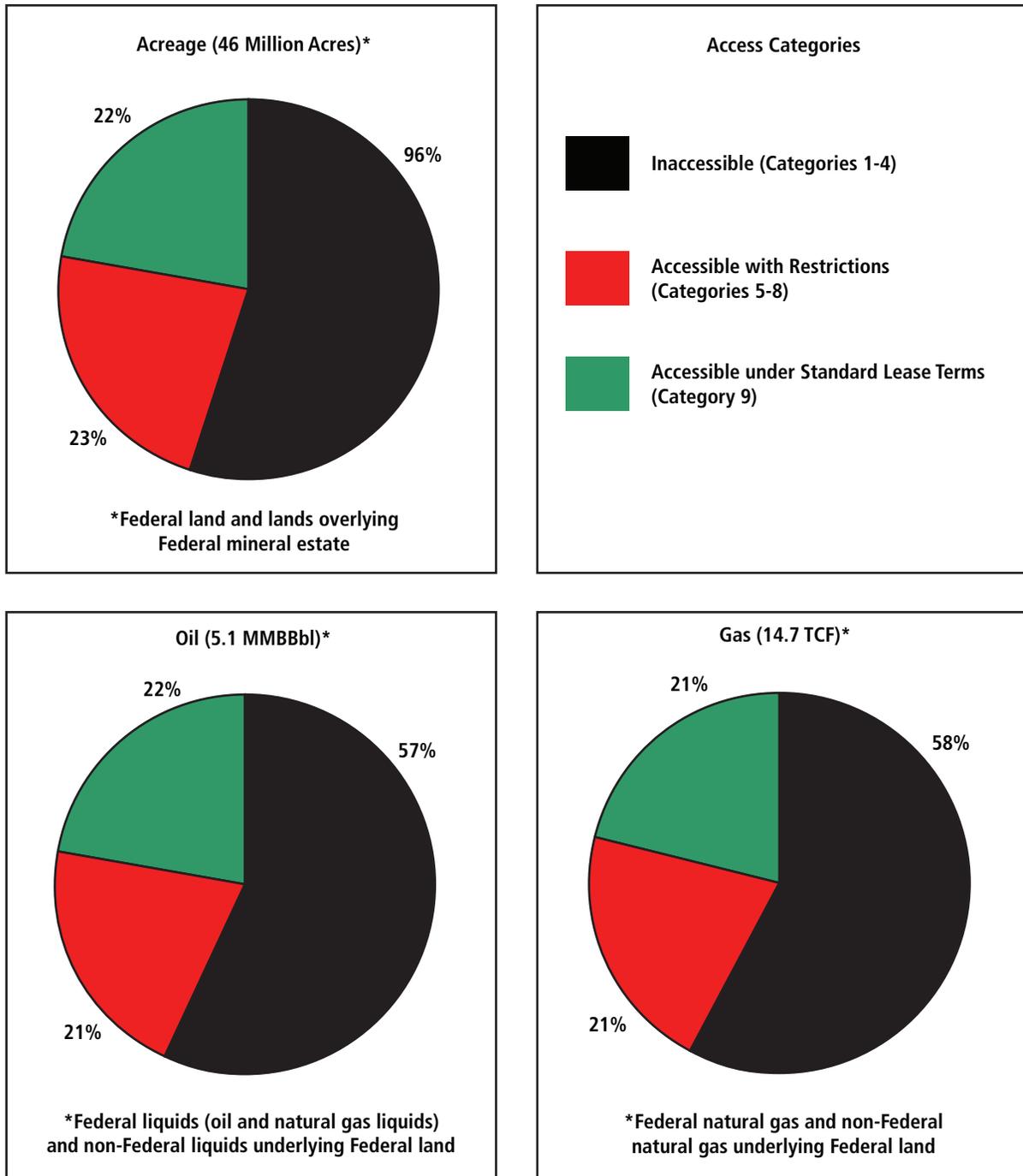


Figure 3-95. Simplified Chart of Results, Extrapolated Results for the Western Region –Federal Land and Oil and Natural Gas Resources by Accessibility

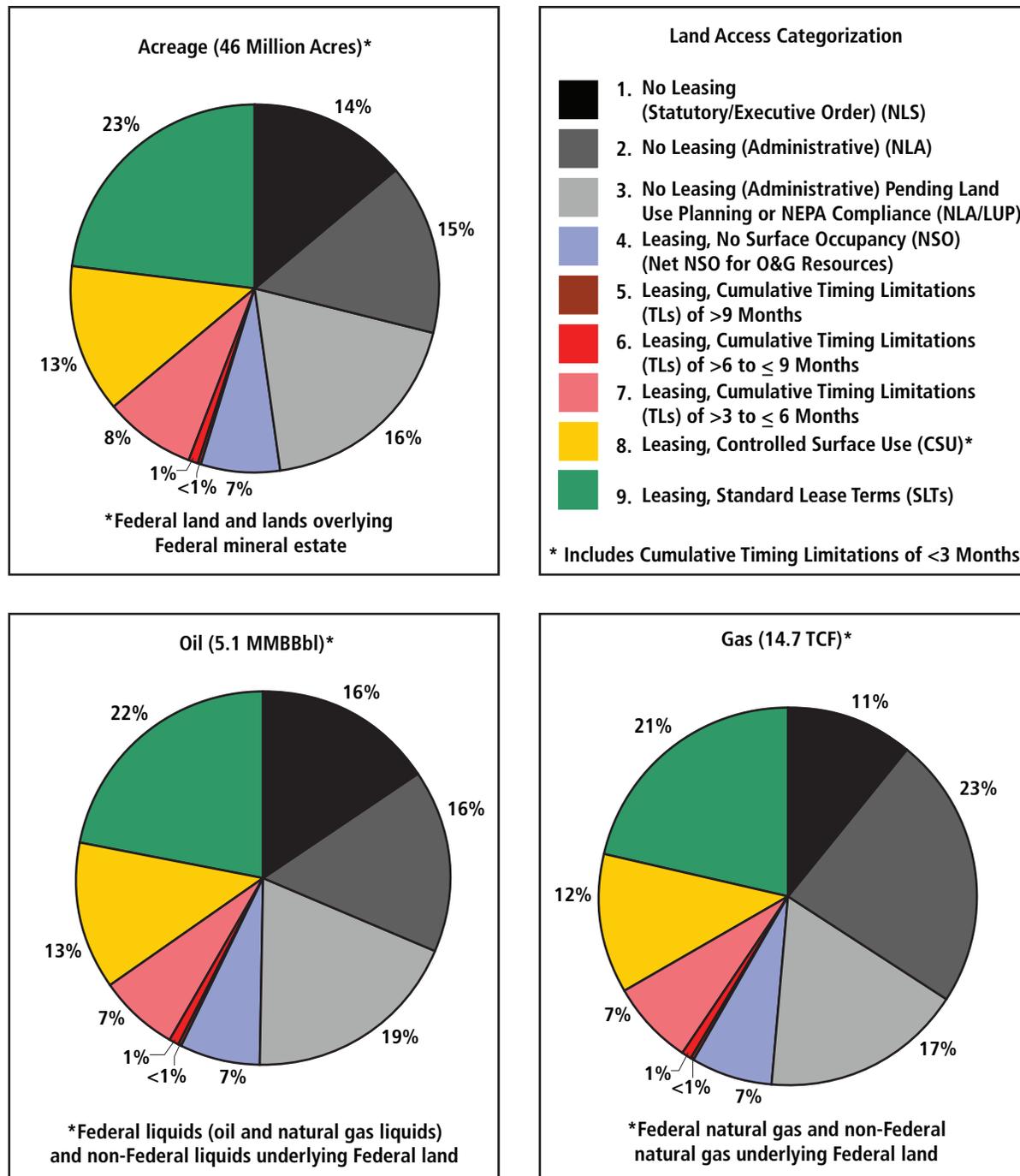


Figure 3-96. Chart of Results, Extrapolated Results for the Western Region—Federal Land and Oil and Natural Gas Resources by Access Category

Table 3-22 Extrapolated Results for the Eastern Region—Federal Land and Oil and Natural Gas Resources by Access Category

Access Category			Area		Resources ^a			
					Total Oil ^b		Total Gas ^c	
			(acres x 1000)	Percent of Federal	(MMbbls)	Percent of Federal	(BCF)	Percent of Federal
More Constrained  Less Constrained	1.	No Leasing (Statutory/ Executive Order) (NLS)	671	5.4%	4	4.0%	61	4.2%
	2.	No Leasing (Administrative) (NLA)	420	3.4%	1	1.3%	19	1.3%
	3.	No Leasing (Administrative) Pending Land Use Planning or NEPA Compliance (NLA/LUP)	2,005	16.1%	5	5.9%	136	9.5%
	4.	Leasing, No Surface Occupancy (NSO) (Net NSO for O&G Resources)	2,009	16.1%	15	15.7%	233	16.2%
	5.	Leasing, Cumulative Timing Limitations (TLs) of >9 Months	-	0.0%	-	0.0%	-	0.0%
	6.	Leasing, Cumulative Timing Limitations (TLs) of >6 to ≤9 Months	251	2.0%	2	2.4%	33	2.3%
	7.	Leasing, Cumulative Timing Limitations (TLs) of >3 to ≤6 Months	1,400	11.2%	13	14.0%	188	13.1%
	8.	Leasing, Controlled Surface Use (CSU) ^d	4,186	33.6%	39	41.7%	561	39.1%
	9.	Leasing, Standard Lease Terms (SLTs)	1,515	12.2%	14	15.1%	203	14.1%
Total, Federal Lands including Split Estate			12,458	100.0%	93	100.0%	1,435	100.0%
Total Non-Federal			198,406		1,109		19,380	
Total Inventory Area			210,864		1,202		20,814	
Summary								
Inaccessible (Categories 1-4)			5,106	41%	25	27%	450	31%
Accessible with Restrictions (Categories 5-8)			5,837	47%	54	58%	783	55%
Accessible under Standard Lease Terms (Category 9)			1,515	12%	14	15%	203	14%
Total, Federal Lands Including Split Estate			12,458	100%	93	100%	1,435	100%

^a Undiscovered technically recoverable resources and reserves growth

Small rounding errors may be present.

^b Including oil, natural gas liquids (NGLs) and liquids associated with natural gas reservoirs

^c Including associated dissolved and nonassociated natural gas

^d Includes Cumulative Timing Limitations of ≤3 months

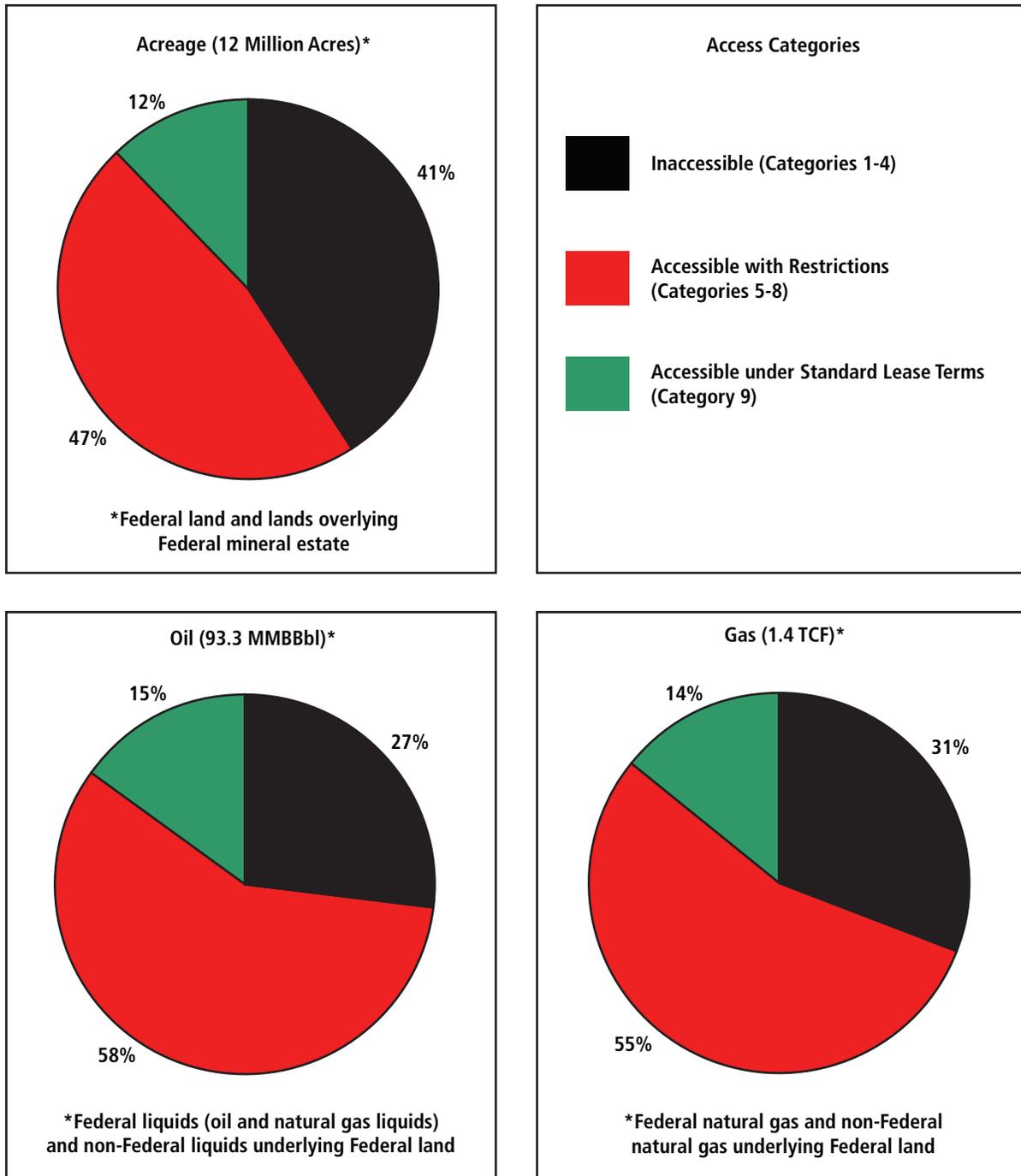


Figure 3-97. Simplified Chart of Results, Extrapolated Results for the Eastern Region—Federal Land and Oil and Natural Gas Resources by Accessibility

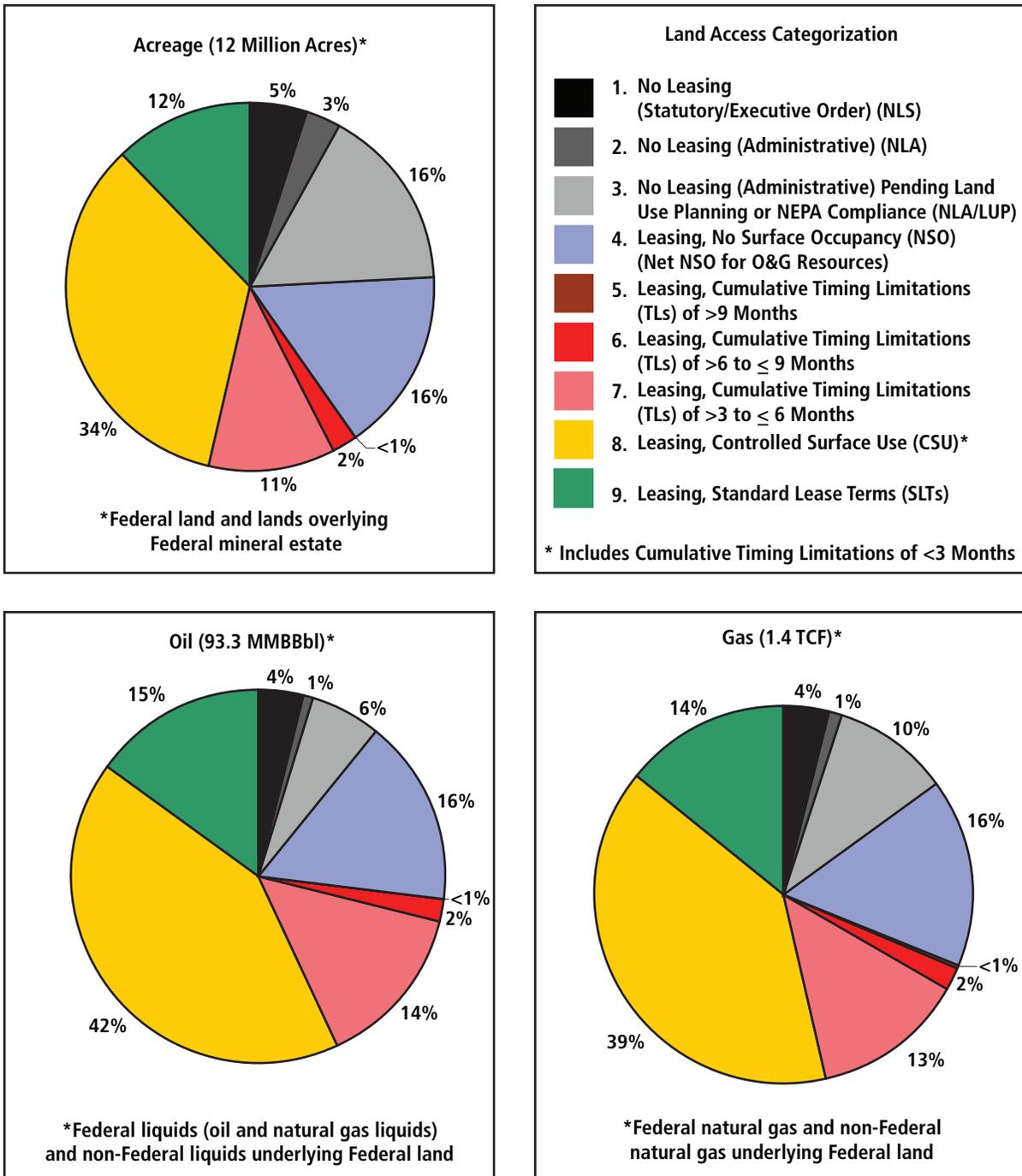


Figure 3-98. Chart of Results, Extrapolated Results for the Eastern Region—Federal Land and Oil and Natural Gas Resources by Access Category

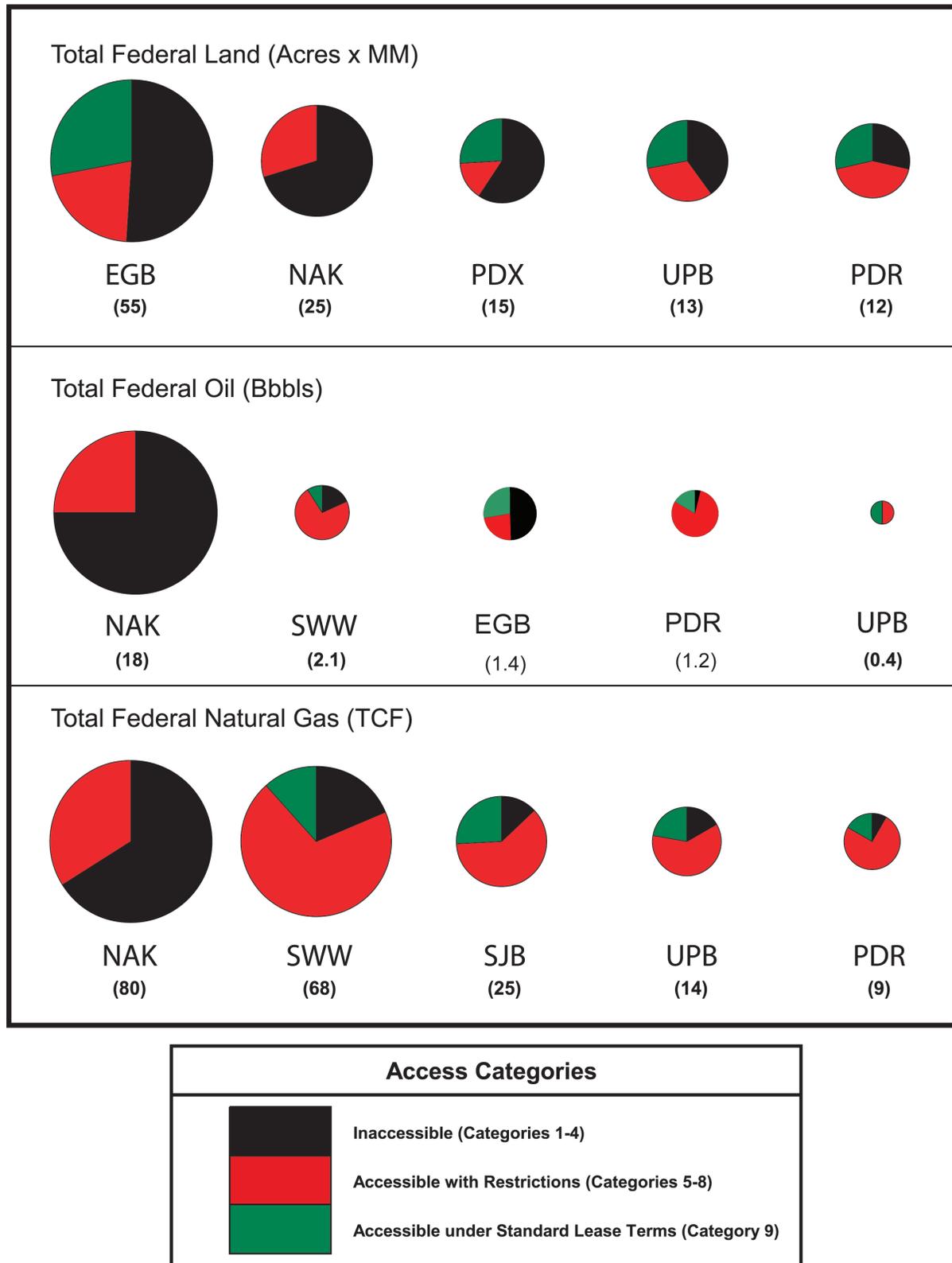


Figure 3-99. Charts of the Top Five Areas

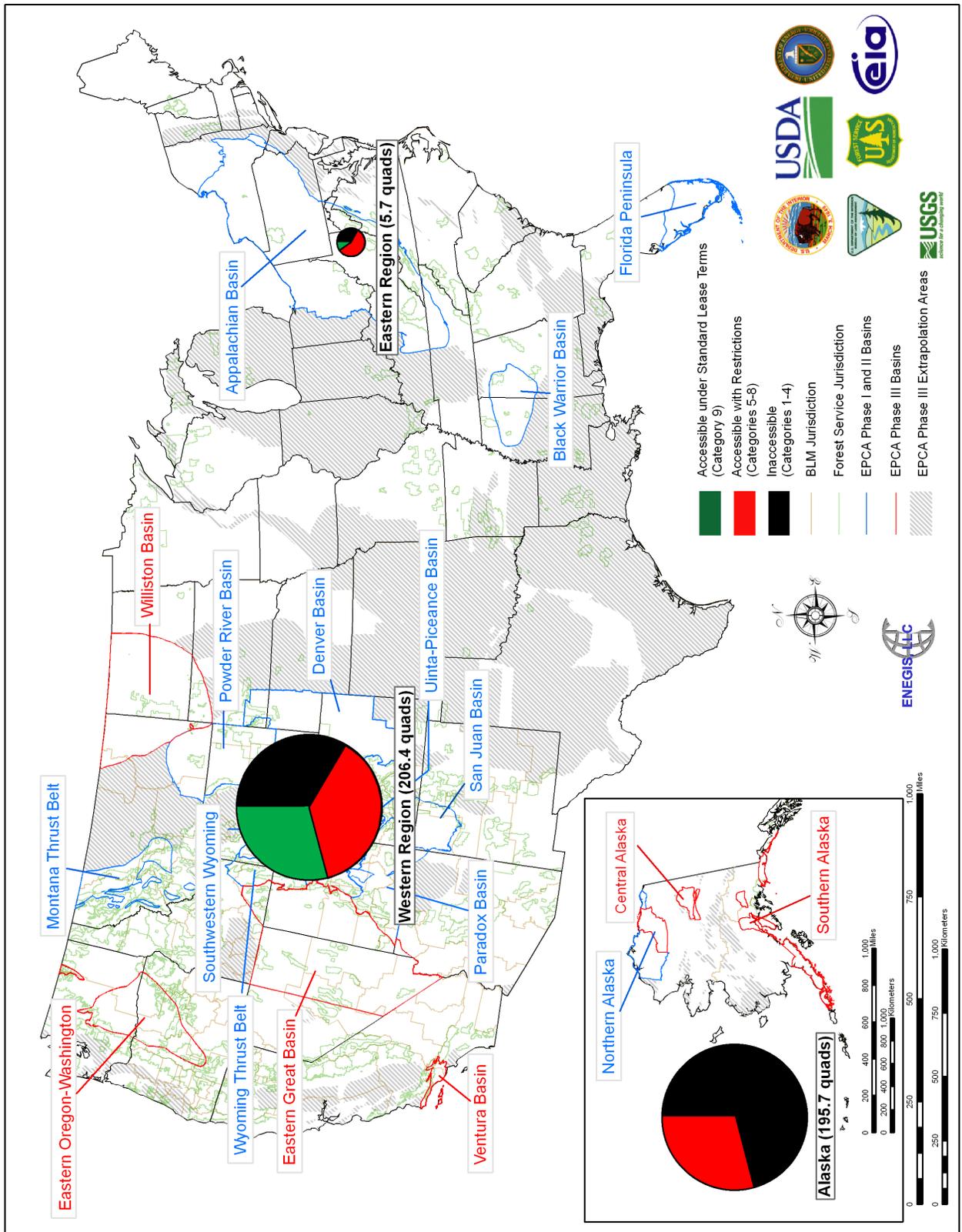


Figure 3-100. Regional Charts

